



Noah's Ark

Full plans to build.
Final Size 31" wide, 15" deep and 17" high.

These plans should print full size on A3 sheet paper.
Make sure there are NO margins.



Noah's Ark

This unique project is great for play, for display, or use as an instructional aid for young folks. The Ark is based on the Biblical story of Noah, his wife and three sons and their wives along with a variety of birds and animals. All patterns are full size though some are half-patterns. There are 28 pair of birds and animals. The spacious ark has a door/ramp that opens for arriving animals. The whole front of the ark tips down to reveal two levels of animal housing including several corrals. Wood containers can be added along with bundled hay for the animals. A ladder leads to an upper loft. The house on top is in two sections and both lift off to reveal more stalls and two bird perches. A surprise is when the cupola on top is tipped to the side a colorful rainbow rises skyward. A matching cupola appears beneath the rainbow with a dove perched on top holding an olive branch from discovered land. The Noah's Ark project is nearly all wood. A few easy to find hinges, brads, screws, dowels, cord etc. will be needed and are listed in assembly steps. Also, buckets, barrels and other excessories can be purchased. Rainbow coloring ideas are included. This is an ambitious project but will yield a woodworking treasure.

Material: The hull of the ark is designed as an elongated bowl. Both sides of the hull are the same with the exception the face side folds open and a door/ramp is cut in the middle. Eleven-3/4" thick, log like strips make up the front hull, eleven more for the back. Both the front and back hull sections fit on a single base, level #1. The two hull sides will mount against a left and right end post, both 1 1/2" thick (figs. 37 & 38, PAGE SIX). Each of the "U" shaped strip is different. If using pine for the hull, acquire four- 8' long boards, 10" wide x 3/4" thick or the hardwood equivalent planed precisely to 3/4" thick (see fig. 12, PAGE THREE). Avoid gluing smaller stock pieces together when making the strips so the grain along the hull will be fairly consistent. Pick stock somewhat free of knots and excessive blemishes. The "U" or bow shaped strips will be temporarily assembled with hot hlue, the outer surface shaped to be smooth then taken apart to add detail. Then the sides will be permanently glued together. Other stock to have on hand includes 1/4", 3/8" and 1/2" thick quality plywood such as Baltic birch. Less than a quarter sheet each will be needed. Or use solid hardwood stock planed to those thicknesses. A 3/8" thick deck fits inside the hull near the top and supports the house and hidden rainbow. The rainbow pivots between two walls that also serve as the back walls for the house (PAGE SEVEN). Extras can embellish the interior including timber frame walls with bird perches on top, fenced corrals, a ladder, plus the animals and Noah's family. Overall size of the ark is 31" wide x 15" deep x 17" high. Even though the plans hold federal copyrights, it is allowed to make photo-copies of the patterns. The originals can then be preserved for reference. Most patterns are full size though some are half or quarter "mirror image" patterns requiring taping copies together to make the full pattern. Some copiers (or copy centers) may be capable of making a mirror (reverse) image for the second pattern half needed for many parts on the Ark. That will avoid having to trim the second pattern to the line (fig. 22, PAGE FIVE). Apply pattern copies to stock prepared to the thickness noted on the pattern using a spray adhesive like 3M General Purpose 45 sprayed on the backs of the pattern copies. Make modifications if wanted to simplify or enhance the project. If the Ark is to be handled by children, sand thoroughly and watch that small children are supervised around the small parts and hinged areas that can pinch. The patterns for the hull's base (part #1) and the 11 side strips are on PAGES THREE, FOUR & FIVE.

Tools: Common shop tools are needed including a table and/or radial arm saw, a band saw and/or scroll saw, a saber saw, coping saw, etc. A 1/4" wide band saw blade is fine for most cuts though a 1/8" wide blade may be helpful for finer detail. Other tools include a 3" or 4" belt sander, 1" belt sander, orbital sander, a small drum sander, a brad gun, drill press with assorted standard drill bits, and a router with a 1/2" round over bit and a chamfer bit. Also have on hand assorted wood clamps, a compass, degree gauge, measuring tools, and other assorted hand tools (see various steps). A glue gun, wood glue and sanding supplies will be needed. The ark can be painted or apply a lacquer finish. It will be helpful to read ahead and look over the drawings and patterns to become familiar with upcoming steps and materials and tools needed. Please exercise proper safety while operating power tools.

Construction
Consider a lighter wood color for the hull and darker wood color for the base (level #1), the two end posts and the 3/4" boarder trim that goes across the top of both sides of the ark (fig. 1). Make four copies of the quarter pattern for the ark's base, level #1 in fig. 15 (PAGE THREE). Follow the information there and cut the base from 3/4" thick stock. Route around the underside except for the flat ends where end posts will attach.

Follow the pattern in fig. 19 on PAGE FOUR and cut two end posts from 1 1/2" thick stock. See routing information there.

Look over the information in fig. 22 on PAGE FIVE then make copies of strip patterns for the two sides of the hull. The patterns are on PAGES THREE, FOUR & FIVE. Prepare all the strip patterns before cutting. If using patterns again for the second part of the hull use only enought adhesive to hold the pattern in place during cutting, but light enough so the patterns can be removed and reused.

Because the strip patterns are thin it is important to place them on 3/4" thick stock with the right span from one end to the other. Note the span distance printed on each pattern. If it is needed, readjust the pattern so the spread is within 1/8" of the noted distance. Also note that copy machines can vary making copies slightly smaller or larger than the original. It may help to lay the patterns out on stock beforehand for the best use of wood (fig. 12, PAGE THREE). The hull strip's lengths and and depths vary so trying them in different positions may maximize the use of wood. It is very important, even before the pattern is removed to write the strip number on both (flat) ends of each strip. See figs.13 & 14 on PAGE THREE. Mark the strips for the face of the ark with one color and the back strips with another color. The reference number is important during some strip alterations and so they are stacked in the right order. Make all 22 hull strips.

With the base, stem and stern and 22 strips complete proceed to text on PAGE SIX

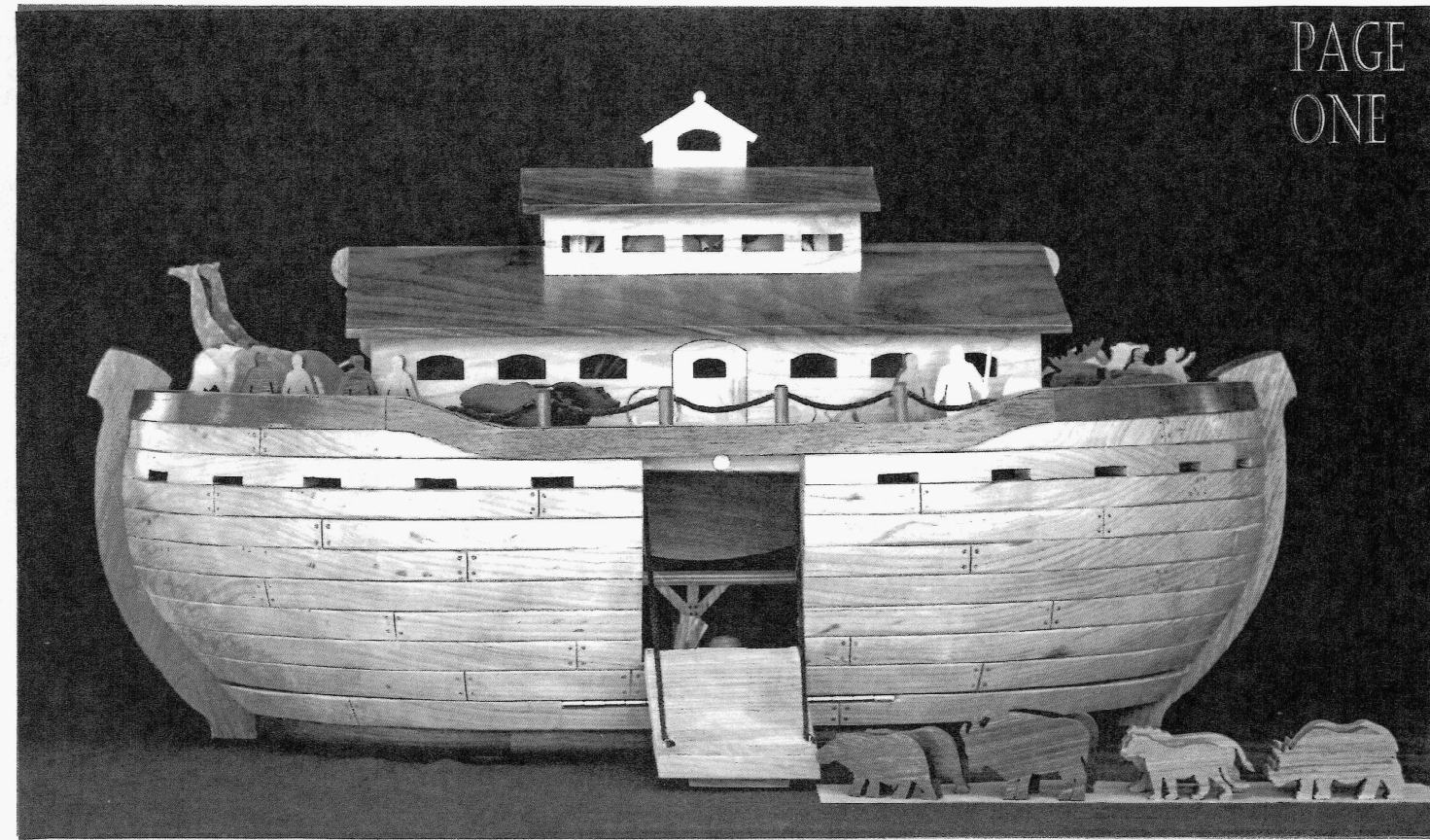


Fig. 1



Fig. 2

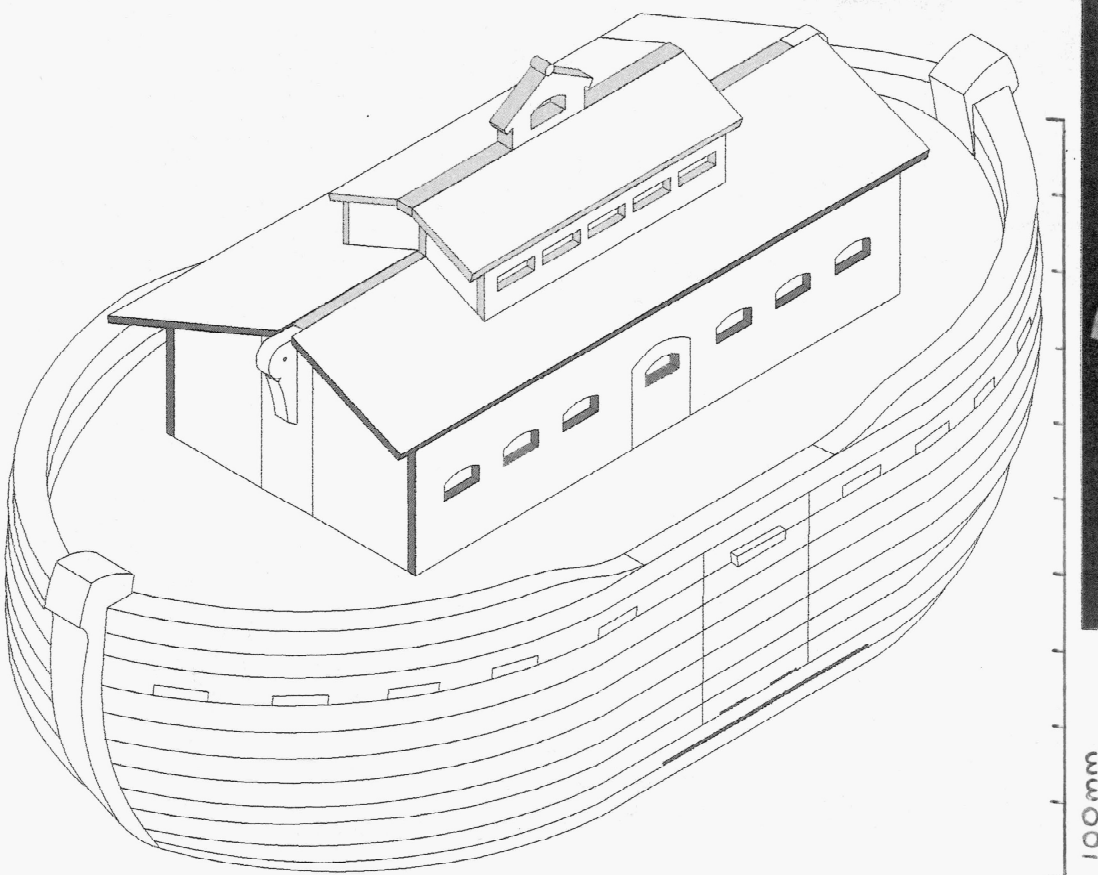


Fig. 3



Fig. 4

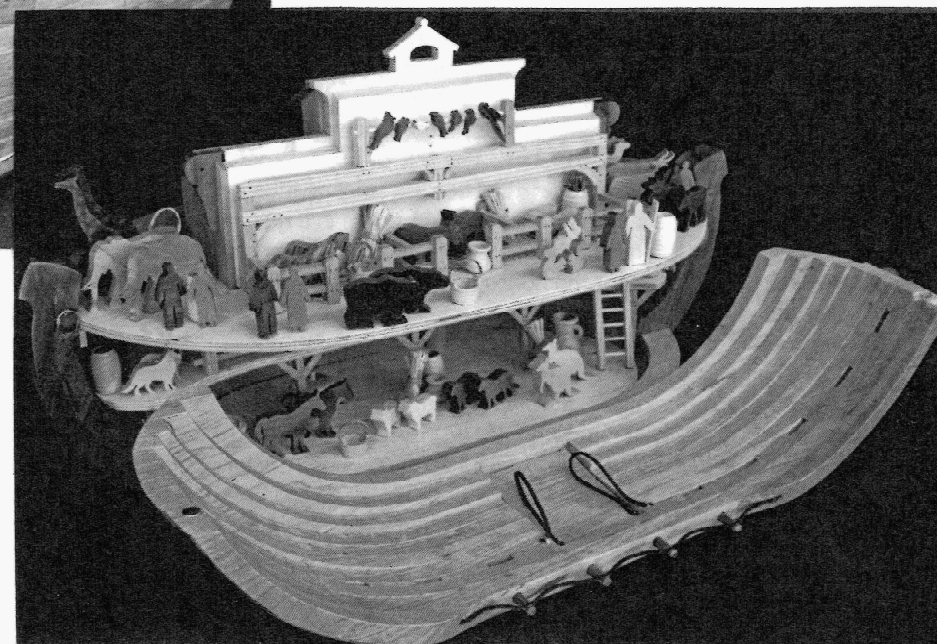


Fig. 5

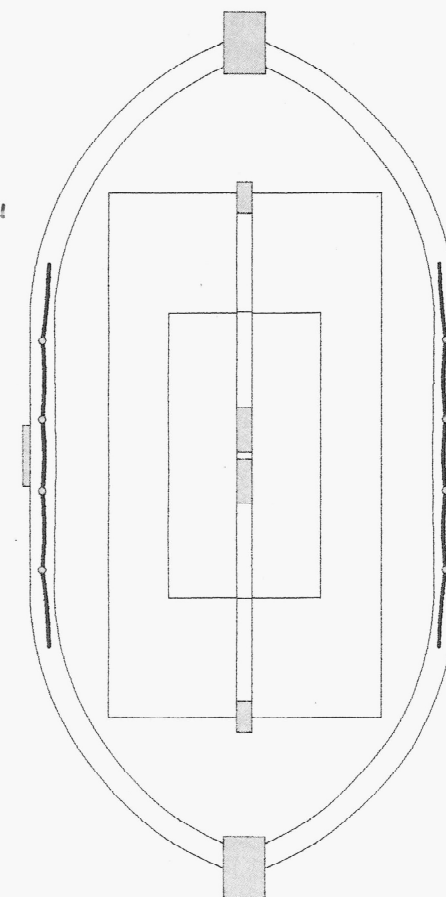


Fig. 8

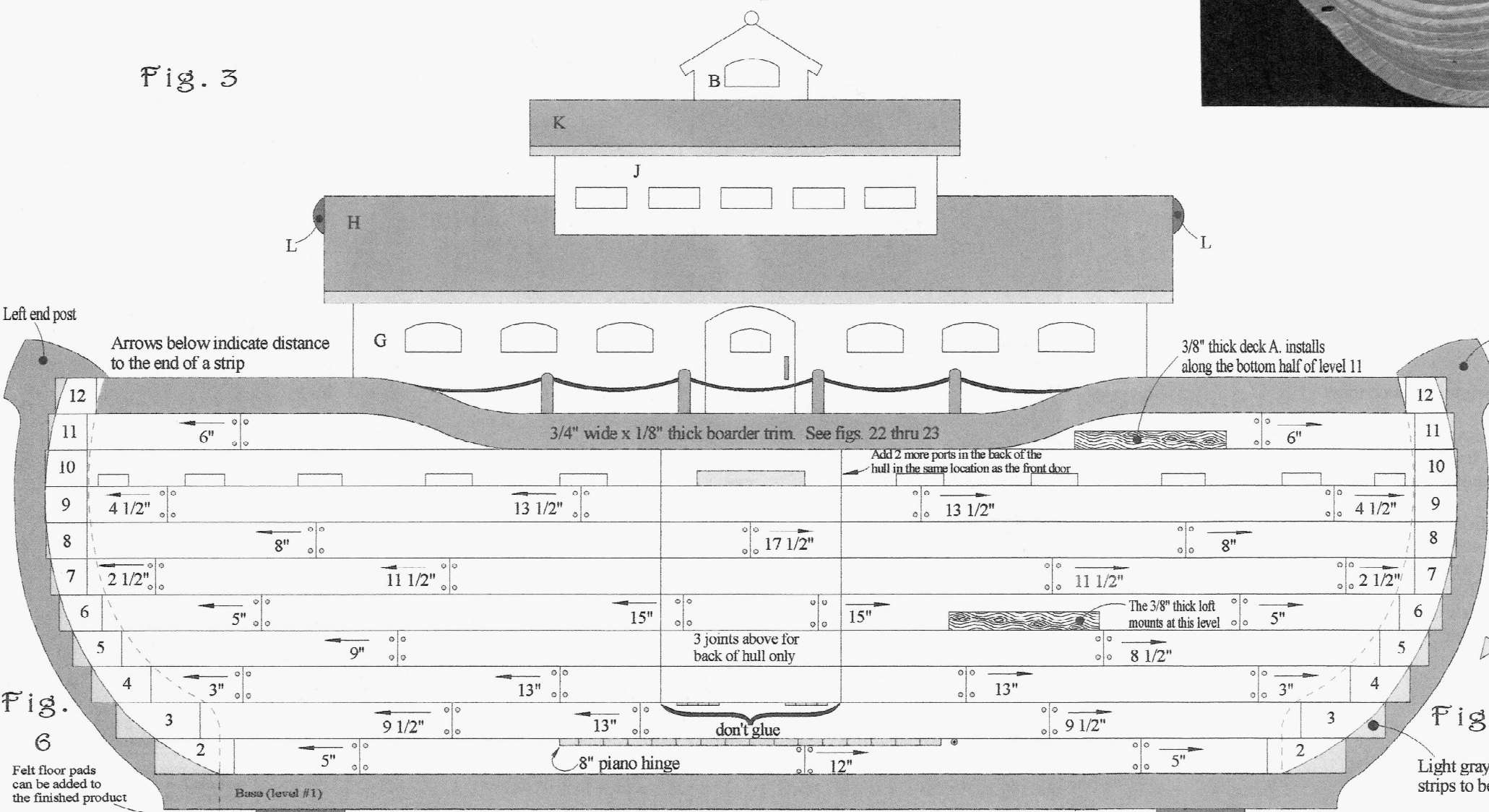


Fig. 6

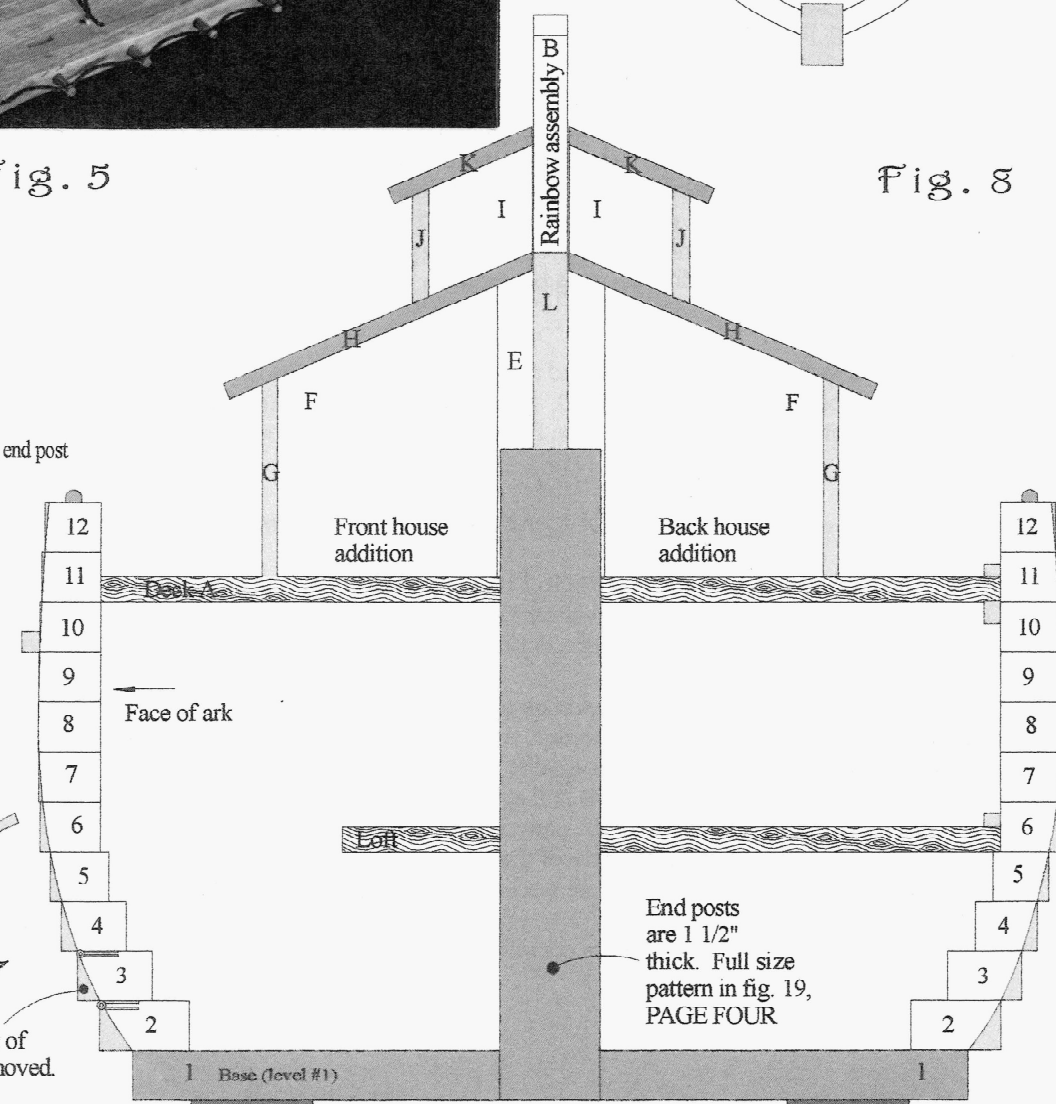
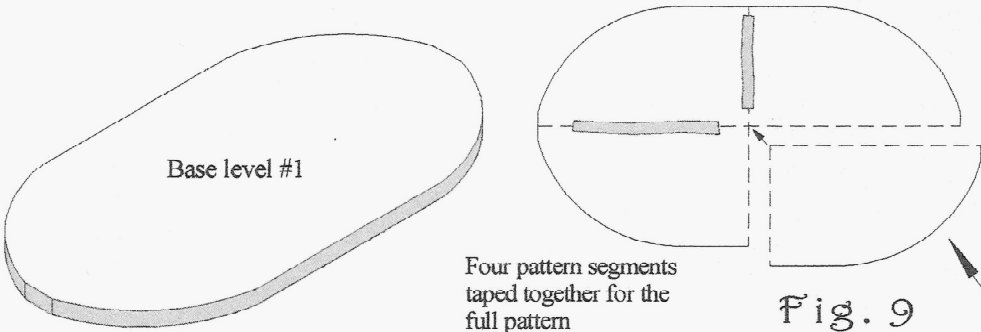


Fig. 7

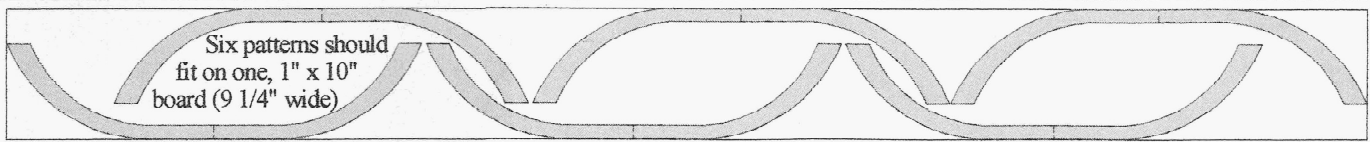
Base (level #1)
3/4" thick
Full size pattern
Make 4 copies (see fig. 9)

A jig saw will be handy to cut longer boards to a more manageable size.

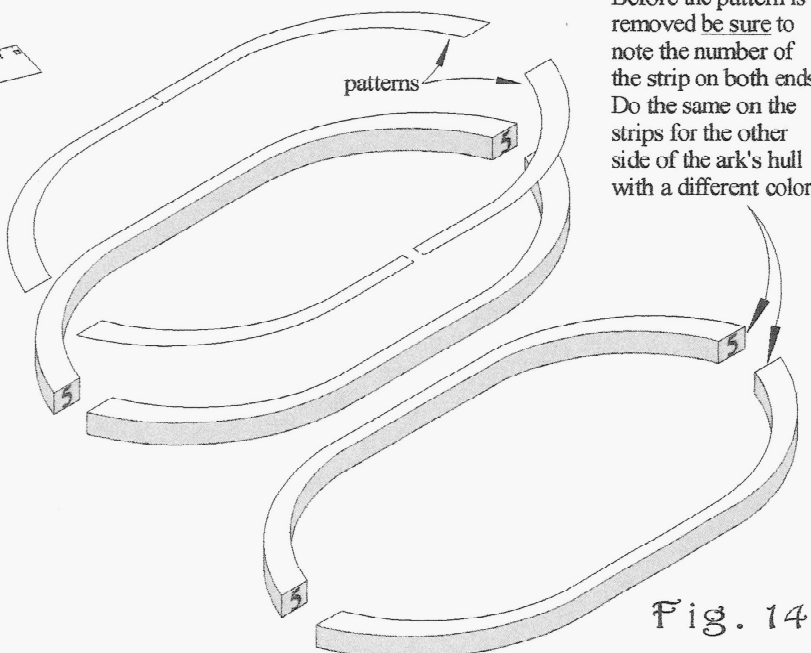
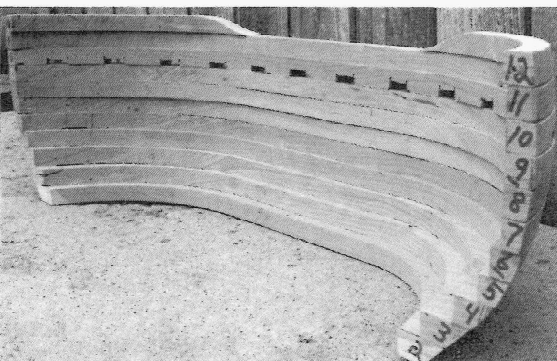
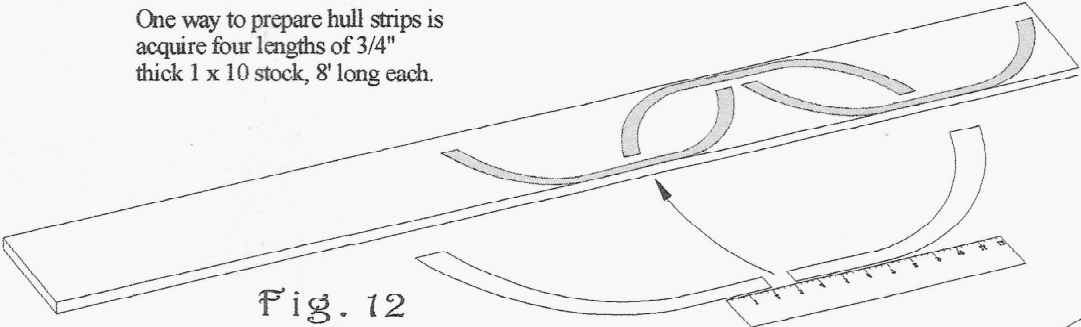
Before the pattern is removed be sure to note the number of the strip on both ends. Do the same on the strips for the other side of the ark's hull with a different color.



Don't route either end along the flat area

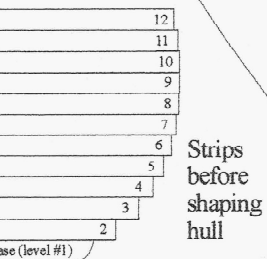


One way to prepare hull strips is acquire four lengths of 3/4" thick 1 x 10 stock, 8' long each.



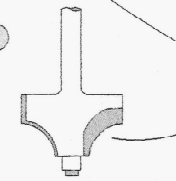
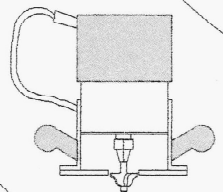
Add strip number here

When building up sides, align all strips at their ends



NOTE: Before making the strips see fig. 22 on PAGE FIVE.

Round over four corners at level #2



full size side view of the underside of base #1

Reference number for the spread to maintain when attaching patterns to stock

Fig. 15

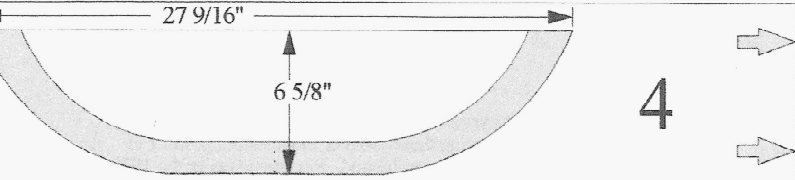
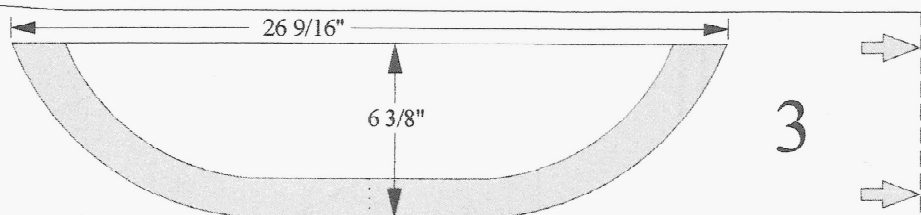
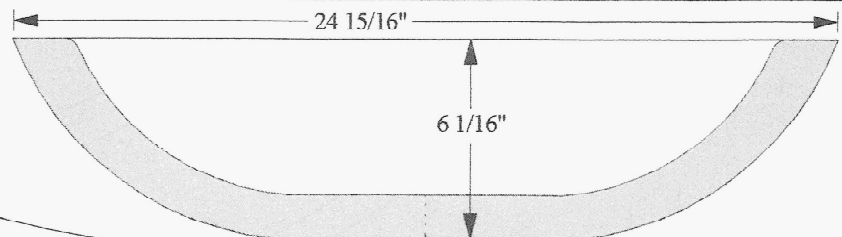


Fig. 16

Tape pattern halves together at the dashed lines. Place on wood for the best location around knots and flaws. Mark the location where the pattern will go then apply spray adhesive and replace at the reference lines.

Fig. 10

All four corners are the same at each level.

Fig. 11

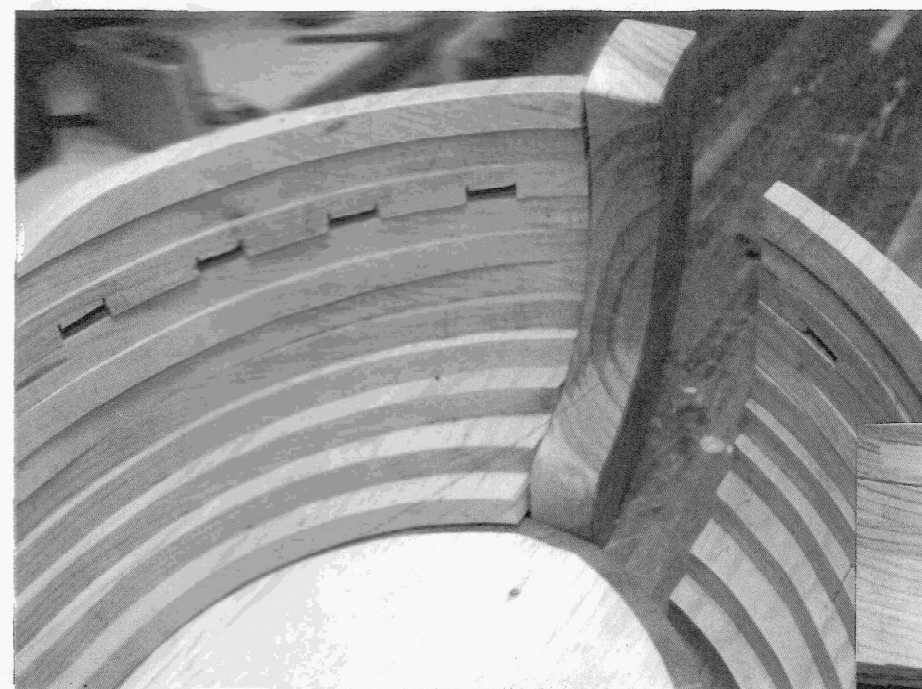
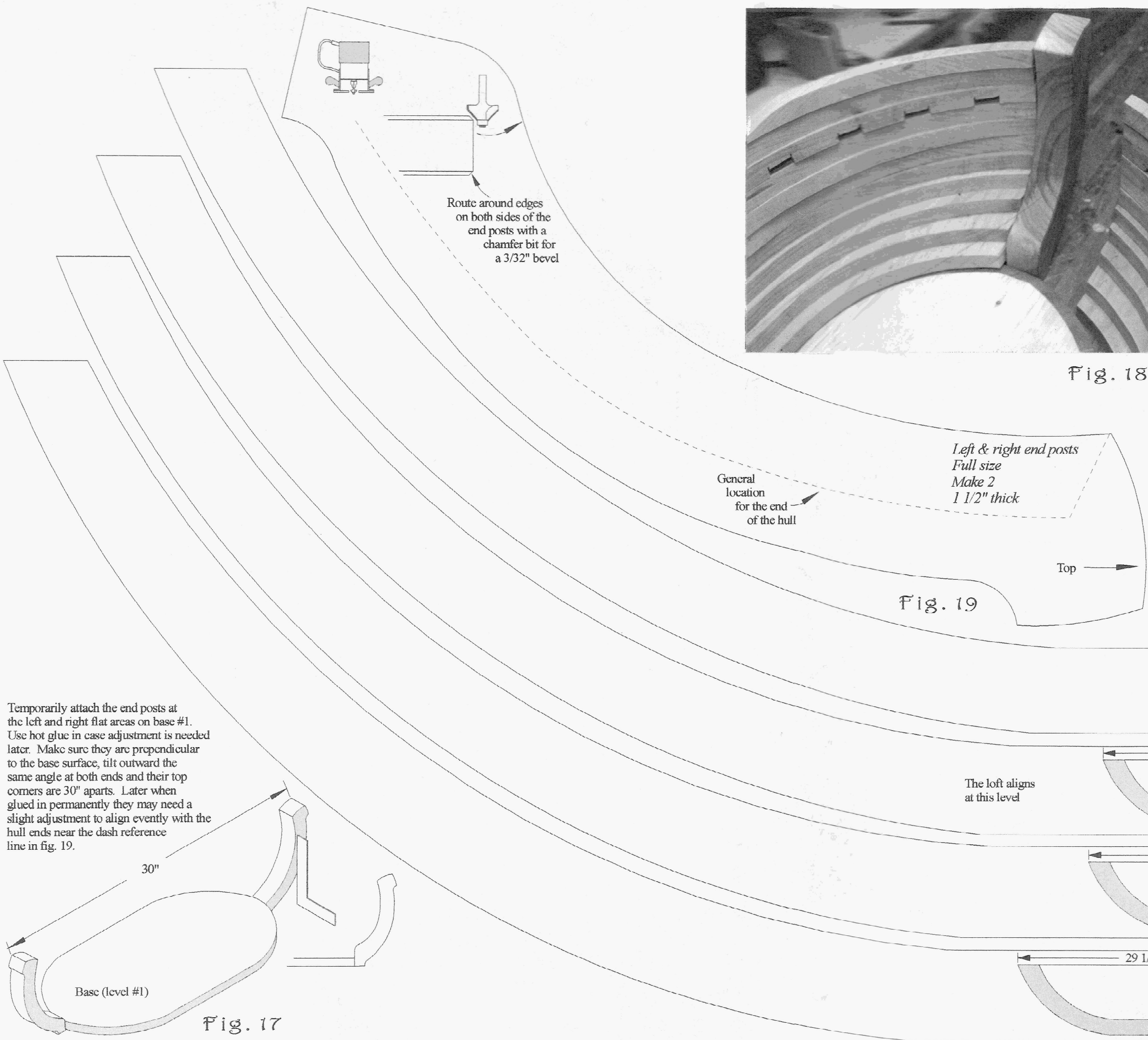
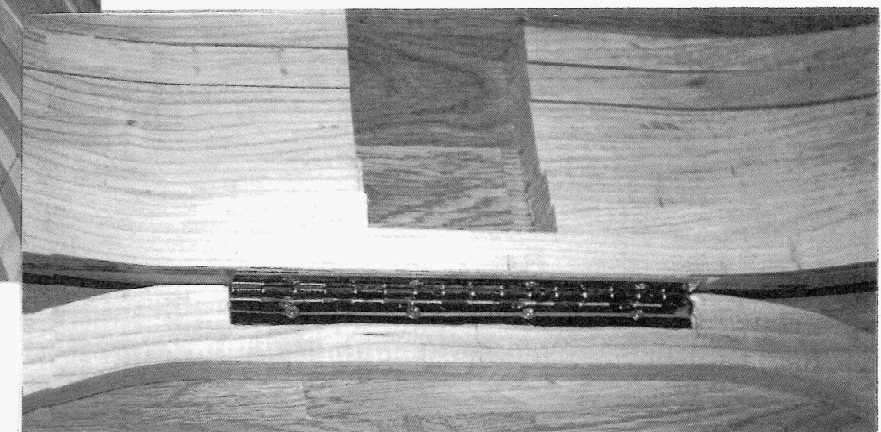
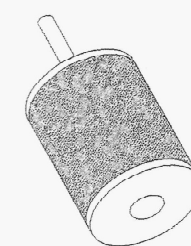


Fig. 18



Inside view of the hull showing the door/ramp cut in the hull's face side. Also shown is the bottom wing of an 8" piano hinge installed in a rabbet in strip #2 and the top wing attached to strip #3. The hull base is not in place.

Fig. 19



It is not necessary to shape the stair-step edge on the inside surface of the hull (fig. 18). But possibly drum sand the along the inside edges of the strips and round over the sharp edges before the hull sides are assembled.

Temporarily attach the end posts at the left and right flat areas on base #1. Use hot glue in case adjustment is needed later. Make sure they are perpendicular to the base surface, tilt outward the same angle at both ends and their top corners are 30" apart. Later when glued in permanently they may need a slight adjustment to align evenly with the hull ends near the dash reference line in fig. 19.

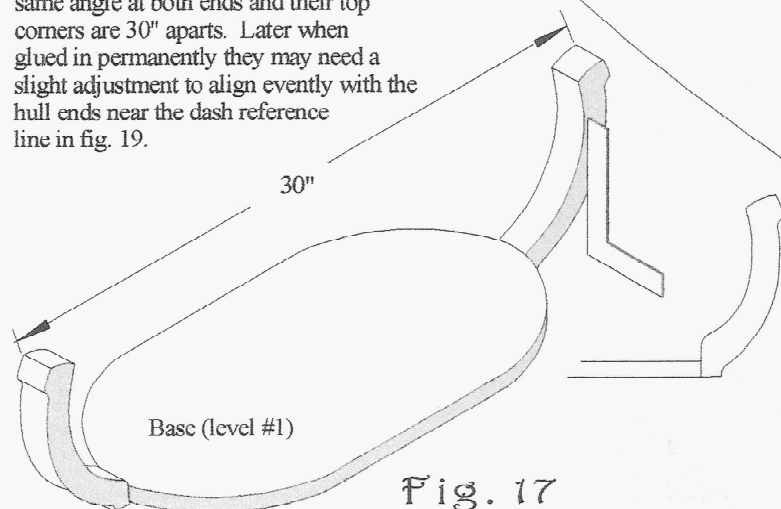


Fig. 17

The loft aligns at this level

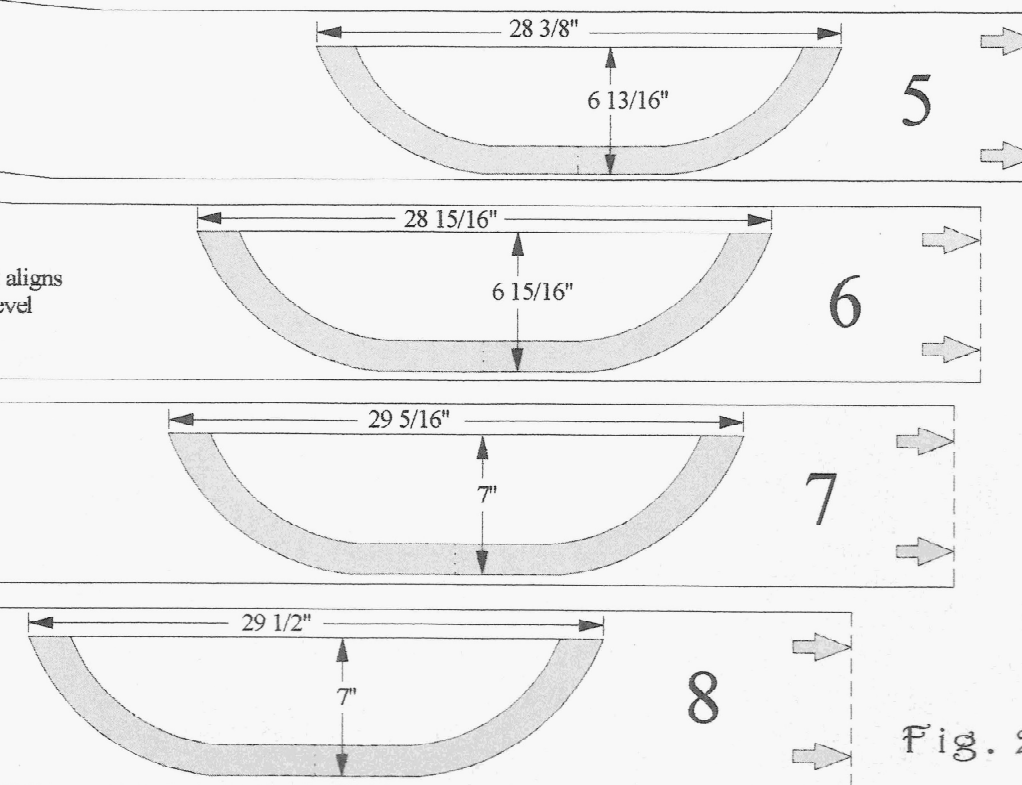


Fig. 20

The gray pattern below is used for two procedures on the hull. First it is used as a guide to mark strip #12 for removing the center part of the strip (fig. 25 below). Center the pattern on the strip, trace onto strip #12 and cut. Repeat on strip #12 on the other side of the hull. The second use of this pattern is to combine it with the pattern extensions in fig. 23. See fig. 24. It will be used later for making a 1/8" thick decorative boarder for across the top on both sides off the hull (figs. 1 & 6).

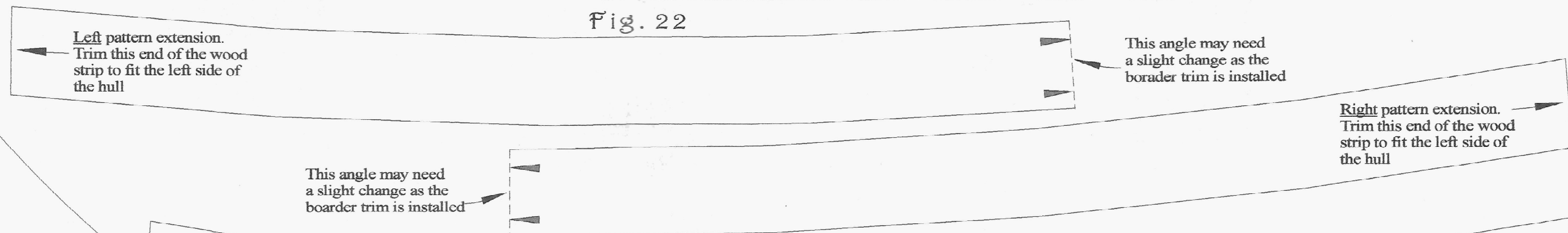


Fig. 22

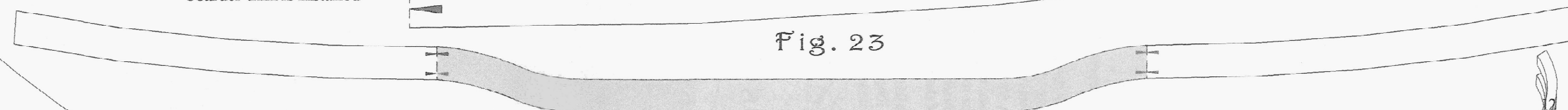


Fig. 23

Fig. 24

Though the 1/8" thick boarders along the top of the hull (on both sides of the ark) could be made as one long strip, it will be easier to make them in three segments (matching the patterns). Then if a slight angle change is needed along this curved hull surface, the joints where the parts meet could be changed slightly for a better fit.

Middle of strip #12 removed

Strip #10 for the back of the hull
Strip #10 for the face of the hull

Two more ports added

Rectangular ports are cut in the bottoms of both #10 strips. Cut ten ports in the #10 strip for the face of the hull and twelve in the strip for the back of the hull. There are no ports where the fold down door/ramp will go. Two additional ports are cut in the back in the same location as the front door (see to the left). See the pattern in fig. 62, PAGE NINE.

PATTERN PREPARATION
There are eleven- 3/4" thick strips making up the front of the hull, eleven more in the back. Two "half" patterns are needed to make a full strip pattern. With care a pattern can be used again for the matching number strip on the other side. Make 11" x 17" copies of the "half" patterns on PAGE TWO, THREE & FOUR. If an 11" x 17" reversible copy machine is available, make matching mirror image copies. Cut out the two corresponding patterns, for example a left and right pattern for level 2 and tape together at the dashed line. Otherwise make two copies of a page. Trim out one pattern just outside the pattern line leaving the line to cut to (see below) then cut out the matching pattern cutting exactly to the line. Flip that pattern over and align the two patterns at their ends (dashed lines and arrows). Possibly place on stock beforehand to find the best location then mark with a pencil. Apply spray adhesive and place back at the marked points. Double check for the correct spread of the pattern and cut.

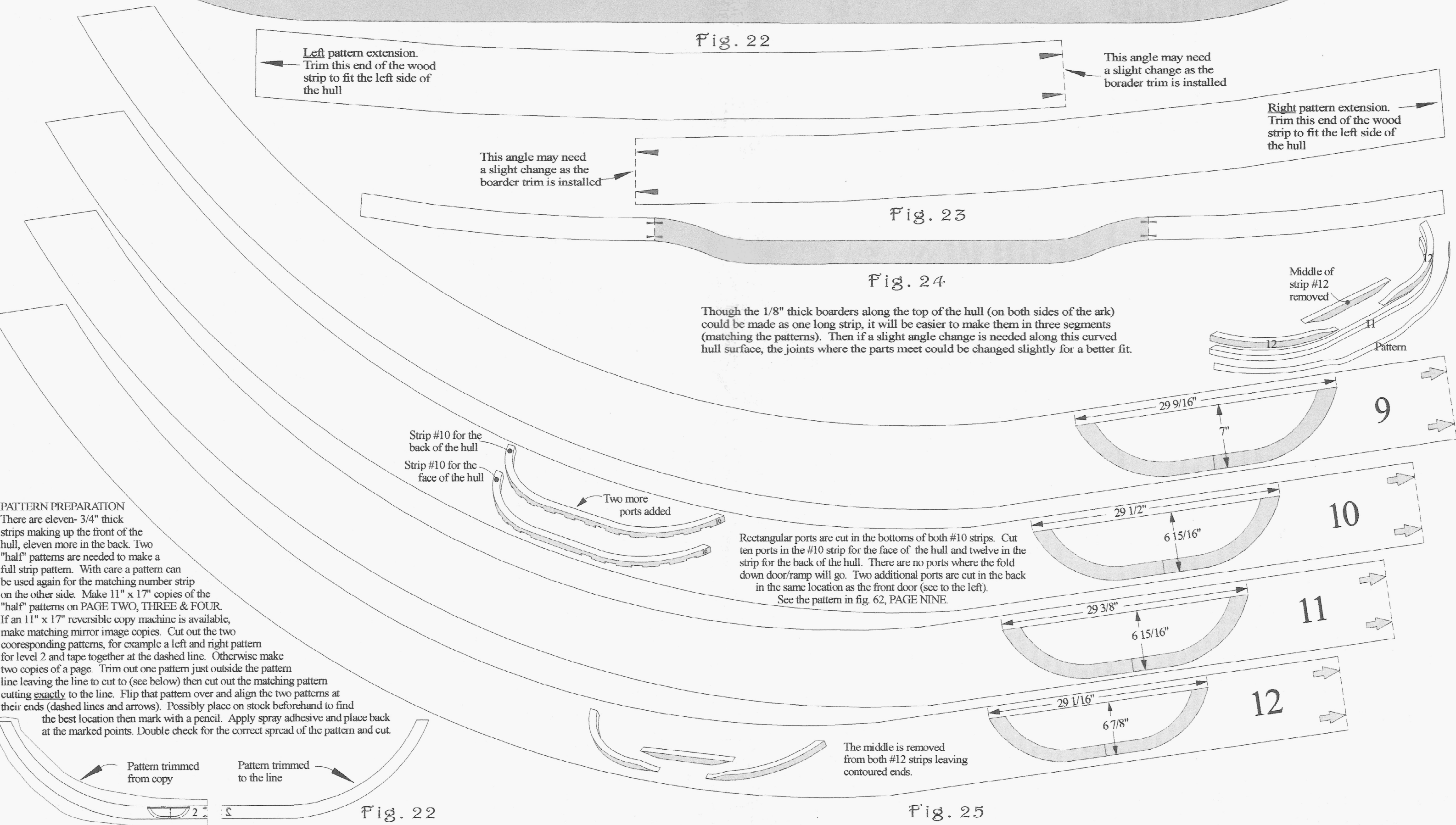
Pattern trimmed from copy

Pattern trimmed to the line

Fig. 22

Fig. 25

The middle is removed from both #12 strips leaving contoured ends.



CONTINUED FROM PAGE SIX See fig. 6 on PAGE TWO showing where the door/ramp will go. When strip #4 is glued down on to strip #3, no glue goes at the point where the door is to be removed. Add a reminder to not glue on that 3 3/4" wide section. Glue strip #4 on strip #3 and continue up to and including the port strip, strip #10. Do not put brads along the area where the door sides will be cut. See fig. 6, PAGE TWO. Mark strips #4 up to strip #10 where the sides of the door/ramp should go. With the Ark on a flat surface, a square will be handy to assure perpendicular lines. See fig. 6, PAGE TWO and fig. 35 PAGE SIX. Cut with a hand or jig saw making straight cuts down to the top of strip #3. With no glue at the bottom of the door opening, the door should remove easily. Next, cut the door to be 1/2" thick by sawing 1/4" off the back (fig. 33 PAGE SIX). The thinner door is a better ramp size plus it allows a space behind the top of the door for a suggested magnet latch to secure the door shut (figs. 33 & 35). Acquire 1/2" and 3/4" diameter flat Neodymium magnets from a hardware store or the internet for both the door/ramp and the front of the ark. Or use Velcro or mechanical latches of your choice. For a magnet latch, cut a wood tab 3 3/4" long, 1/2" high and 1/4" deep. Countersink a 1/2" diameter hole in the middle of the strip deep enough for a washer about 3/8" to 1/2" diameter and glue it into the top back of the doorway. Install two 1" x 1" hinges (or similar) to the bottom of the door/ramp and on strip #3 in two mortises for the hinges as deep as the closed hinge thickness (fig. 6 & 7 PAGE TWO). Drill a 1/2" diameter hole in the top rear of the door/ramp deep enough to epoxy the magnet in. The magnet hole should line up with the washer (figs. 33 & 36). The magnet and washer should make contact when the door is closed and the outside of the door should be even with the hull. Make a handle for the door 2 1/4" wide x 3/8" deep x 1/4" high. Glue to the top of the door and in line with the ports in strip #10 (fig. 2). Add cords to both sides of the door (fig. 35, PAGE SIX) around 1/8" diameter. Use a color to complement the wood colors. Use small "u" shaped nails or bend small brads and add hot glue. Attach at the door opening like in fig. 35 behind the door closed position and check that the door will close without catching on the cords. Small chains could be used as well. Glue strip #11 on to strip #10. The center section of the last strip, strip #12 has the center cut out leaving contoured ends on the remaining lengths. Study the drawing in fig. 6, PAGE TWO, figs. 22 to 23 on PAGE FIVE & Fig. 33 PAGE SIX. Use the gray pattern in fig. 22 and apply it to both strips 12, mark where to cut then remove the center section of strip #12 and discard that part. Glue the #12 strip left and right lengths left over down on strip #11 for a good alignment with strip #11 and against the end posts. When dry, it may help to run a drum sander, about 2" diameter down the contoured ends to help blend with the middle of strip #11 (fig. 33, PAGE SIX). A length of decorative trim runs along the top of both sides of the hull. Make 1/8" thick, 3/4" wide using the same pattern in fig. 22 but add the left and right extension patterns in fig. 23. In stead of one continuous piece of trim, possibly make in three lengths, the same as the patterns. The decorative strips are curved to run along strips #12 and down onto strip #11 and back up on the other length of strip #12 (fig. 6, PAGE TWO).

At the two joints where the three decorative strips meet, the angle may need a very slight adjustment so the trim will continue up and along the curved top of strips #12 (see note in fig. 22). The left and right patterns for this decorative strip are slightly longer then needed. Cut the ends of the strips for a good fit at a matching angle where the strip meets the end posts. Glue and clamp the decorative strips as they are bent around to meet the end posts.

The face side of the ark should close neatly up against the end posts. Use your own latching approach, such as Velcro to hold the side closed or use recommended 3/4" diameter and 1/2" diameter Neodymium magnets on both ends of the face side of the hull. See figs. 36 & 39 on PAGE SIX. Fit a 1/2" diameter magnet in a 1/2" hole in the ends of strip #12 on the face hull. Place a 3/4" magnet in a matching point on both right and left end posts (fig. 36, PAGE SIX). Watch that the holes for the larger magnets in the end posts are not exposed to view when the hull is closed. Watch magnet polarity before they are glued so they attract and not repel each other. Magnets should be flush with their surface after Epoxy is applied.

Finish the back side of the hull similar to the top of the face of the hull including the decorative strip. A fence made with dowel posts and cords go in the recessed area on strip #11. They are placed on top of both sides of the hull and into strips #11 (full size in fig. 61, PAGE NINE). The posts are made from 5/16" dowels, 1 1/2" long and will be placed in 5/16" diameter holes drilled 1/2" deep. Drill the holes spaced like the full size drawings in fig. 61 and into strip #11. Cut a slot in the top backs of each dowel post to match the full size drawing in fig. 63. Glue with the slots to the back. If another color of wood is wanted for the dowel posts, fashion dowels following the same procedure shown for making the tiny dowels for the hull's simulated joints in fig. 40, PAGE SIX. Use cord, possibly the same used on the door/ramp to string from post to post. Drill holes in the curved ends of strip #12 for gluing the ends of the cord. See full size drawing in fig. 61. Drill slightly larger than the cord then neatly hot glue the cord ends in the holes with the cord draped as shown.

Continue to the text on PAGE EIGHT to build the ark's deck and rainbow assembly.

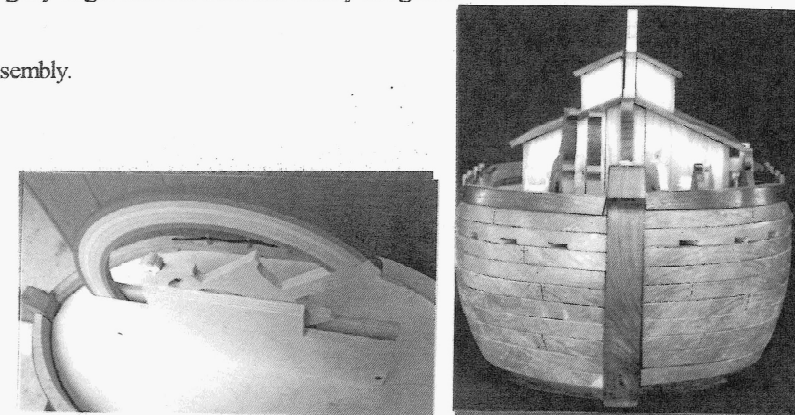
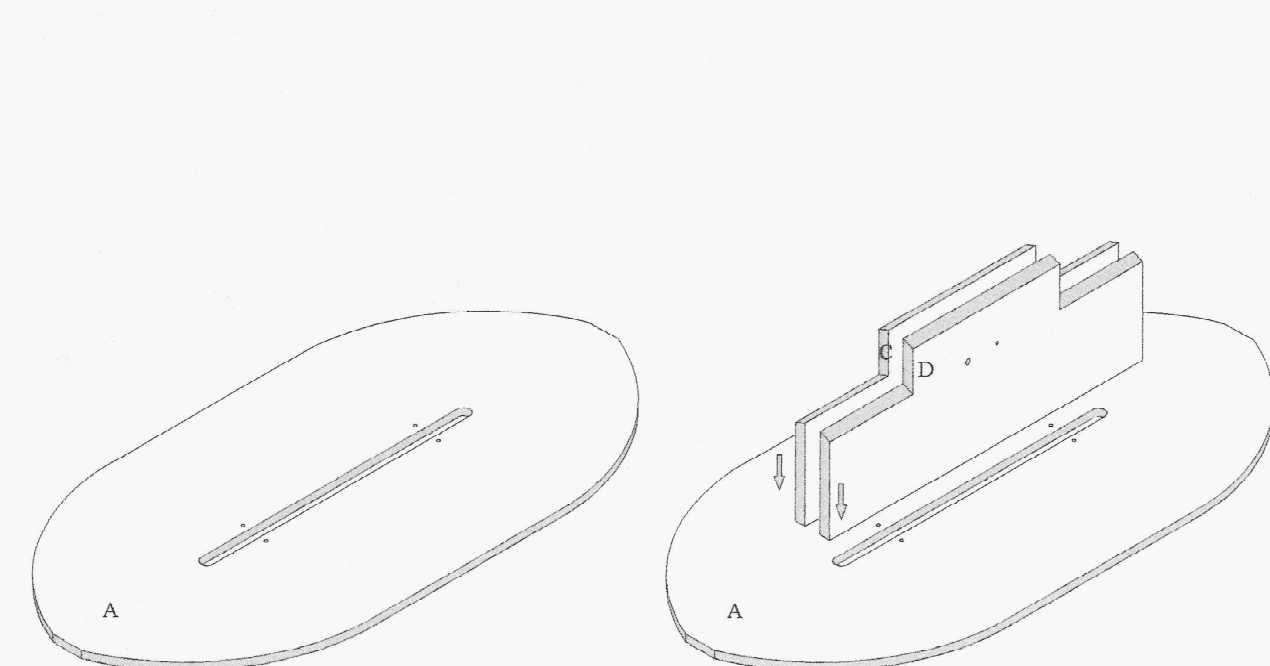


Fig. 42

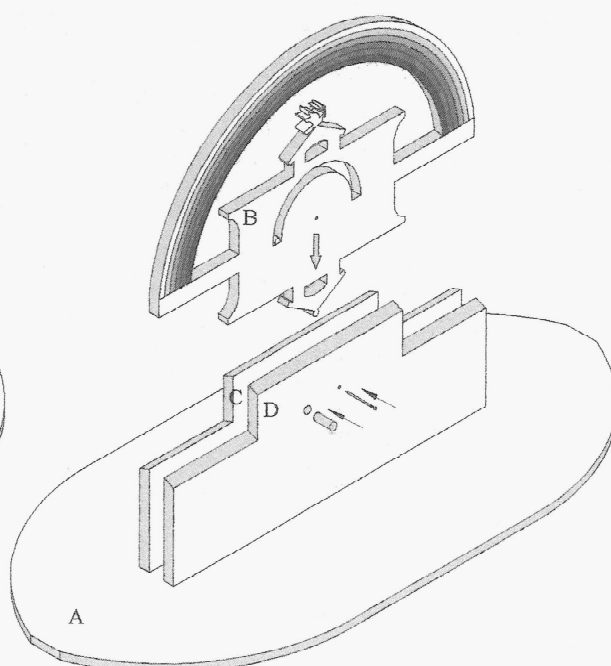


Ark deck A with opening for rainbow assembly

Fig. 43

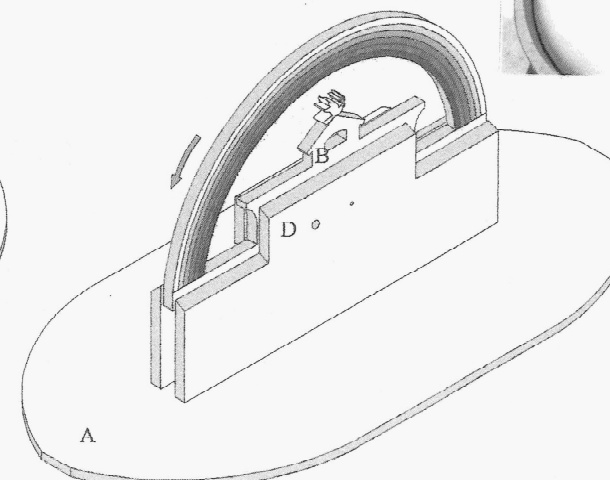
Sides C & D ready to attach to deck A with two screws in each side.

Fig. 44



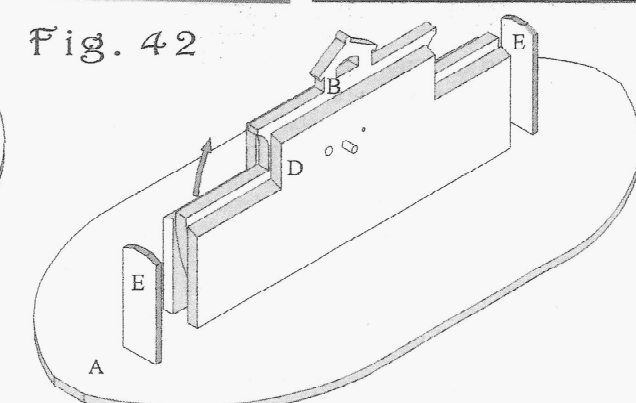
Rainbow assembly rotates on a nail pin. A 1/4" dowel acts as a stop for both directions of the rainbow. See also fig. 78, PAGE ELEVEN

Fig. 45



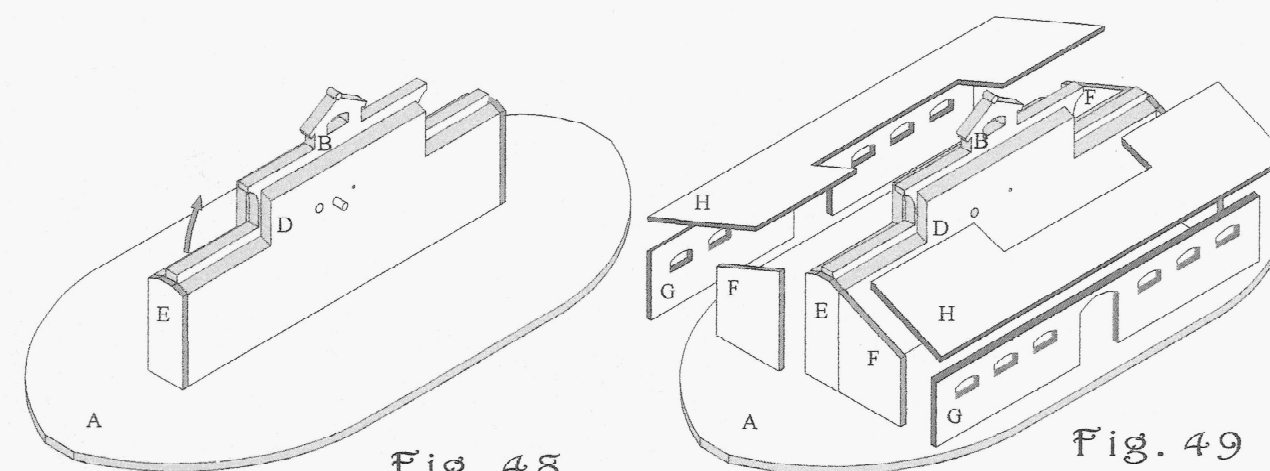
Rainbow installed and in the up position

Fig. 46



Rainbow hidden with part below deck. Both parts E. are ready to cover the ends of C. & D.

Fig. 47

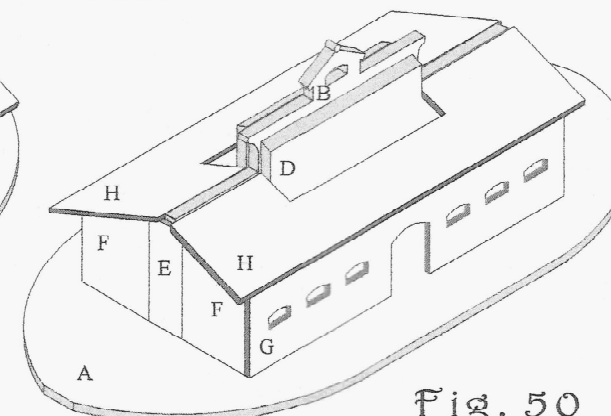


Parts E. are in place and sides C. & D. are ready for the removable front and back house sections.

Fig. 48

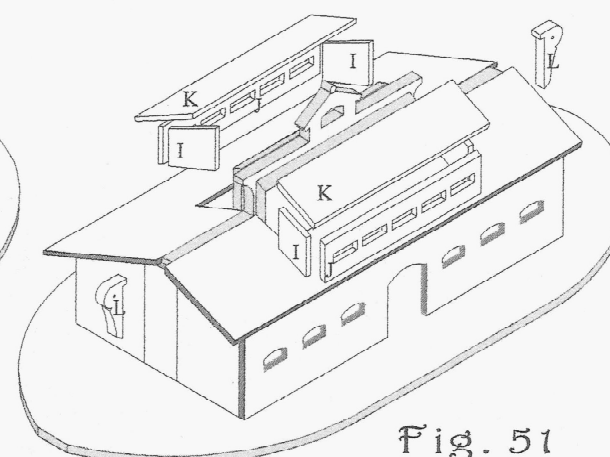
The Ark's house has a bottom level (shown exploded) on both sides of the rainbow assembly. House sections will lift off to reveal corrals inside.

Fig. 49



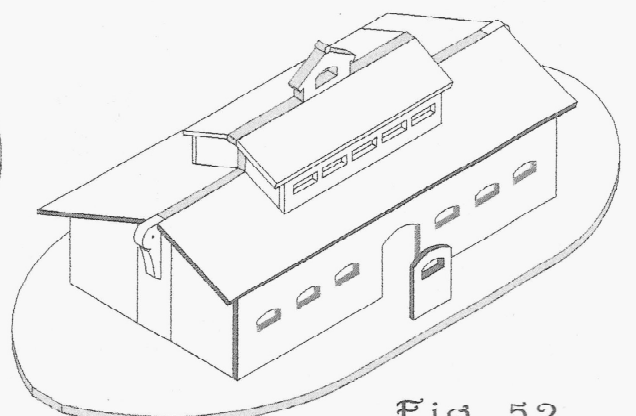
Bottom house level assembled on both sides.

Fig. 50



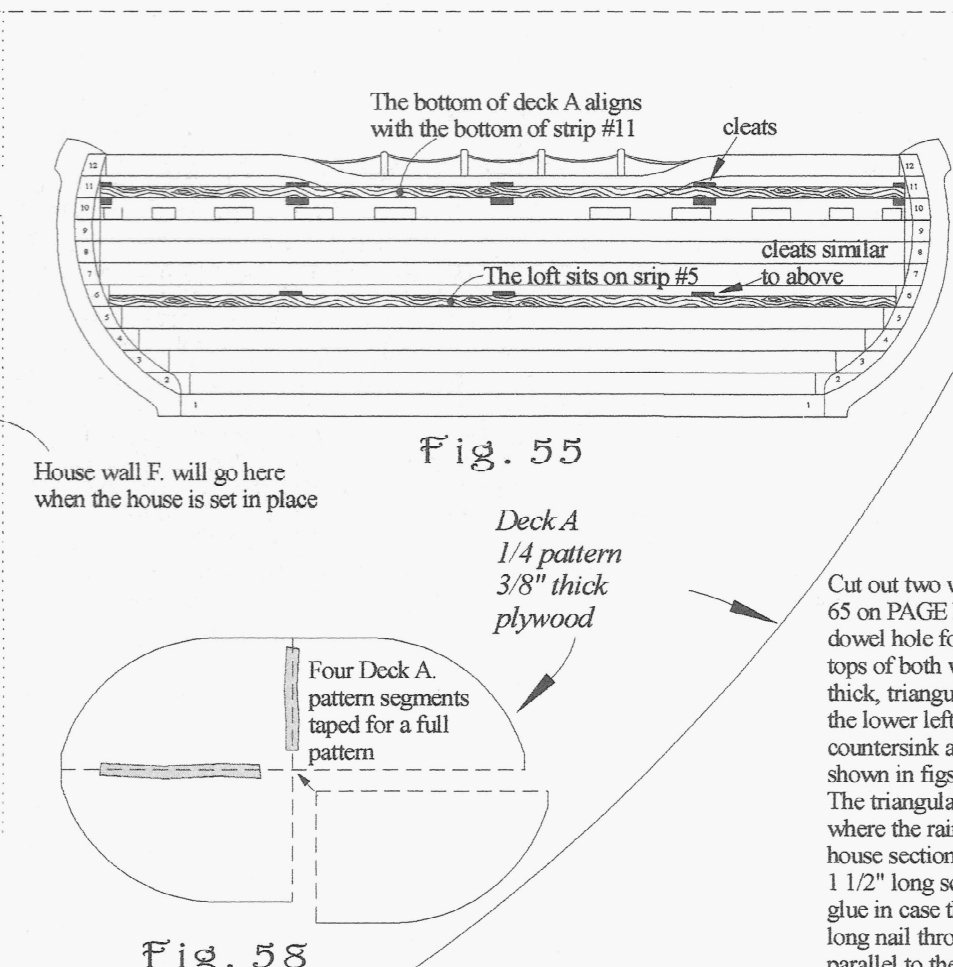
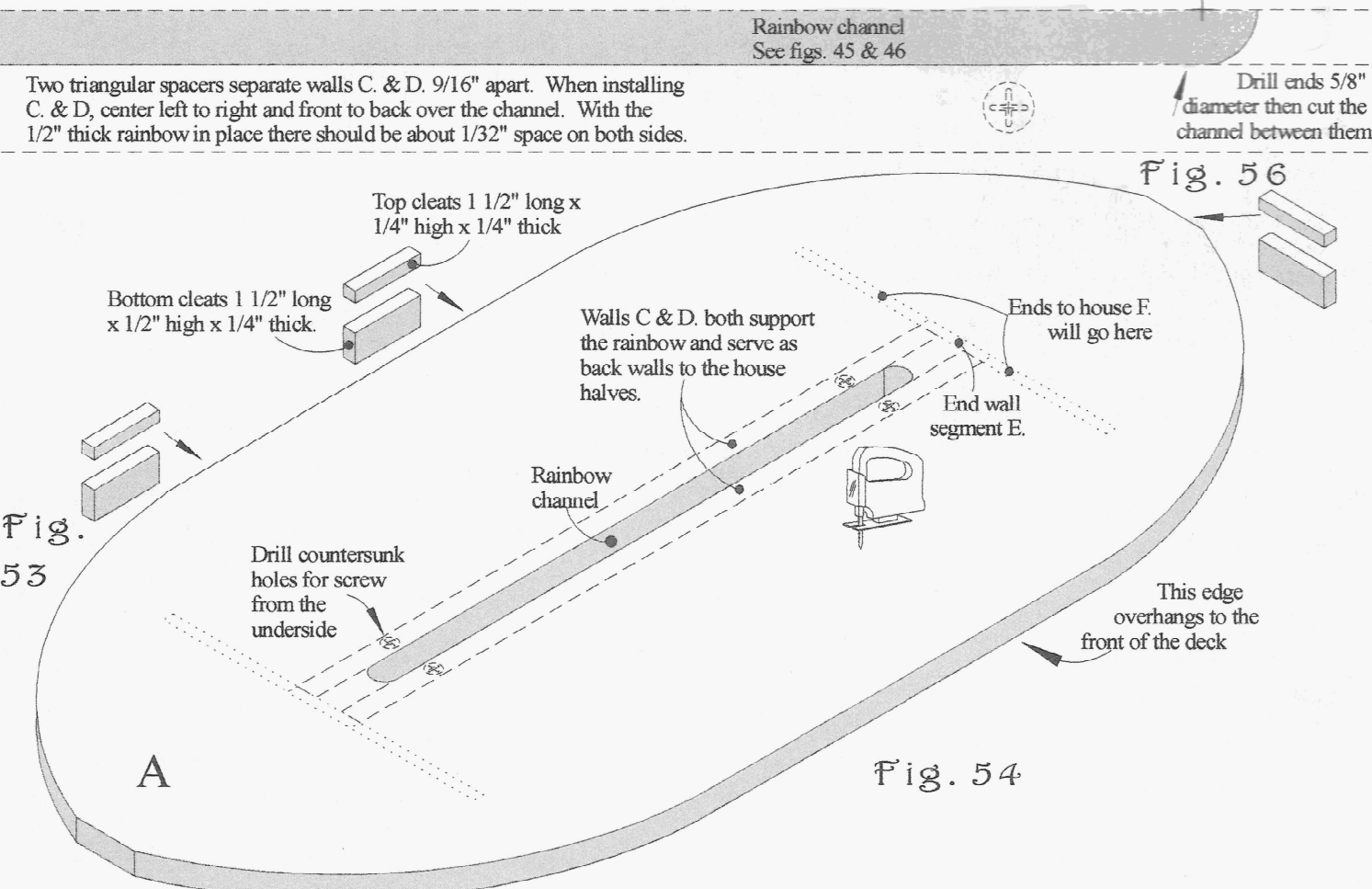
House top level exploded view

Fig. 51



Both sections of the Arks house assembled and slid into place up against C. & D.

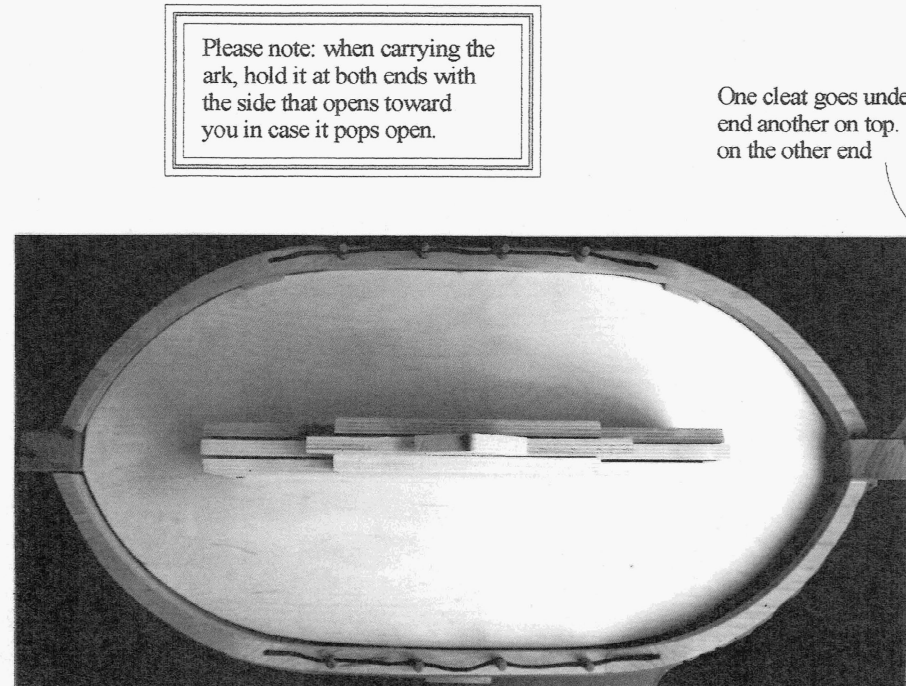
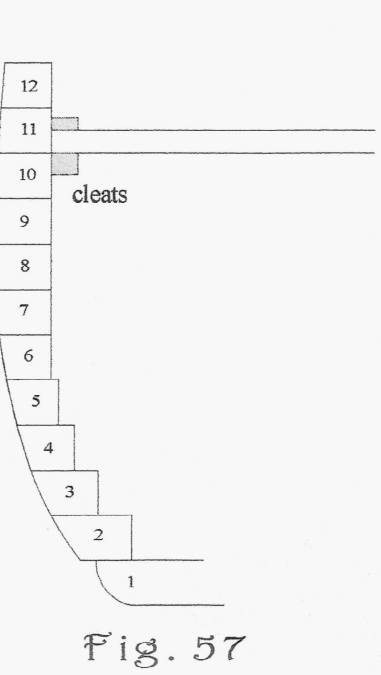
Fig. 52



Install five bottom cleats (fig. 53 & 55) on the underside of both the left and right end posts and at three equally spaced points around the back underside of deck A. Place the smaller matching cleats on the top. Don't allow glue to get on the deck so the deck can be slid out later during further procedures. Some trimming and fitting will probably be needed on the forward (overhanging) edge of deck A. so the front of the hull will close and fit evenly. Sand or cut for a good fit. Running a 2" drum sander along the inside of the hull's front where the deck may be contacting may help. A light inside the hull can help locate the high spots. When the ark is near completion the deck can be secured permanently by adding a small amount of hot glue along the back edge of the deck.

WALLS C. & D.
Cut out two walls C. & D. using 1/2" flat plywood following the pattern in fig. 65 on PAGE NINE. Both walls are the same except for the addition of a 1/4" dowel hole for a "stop" pin for the rainbow assembly in wall D. Cut along the tops of both walls C. & D at 68° where roofs will later fit. Make two- 9/16" thick, triangular spacers from the pattern in fig. 69 on PAGE NINE. Fit in the lower left and right corners sandwiched between walls C. & D. Drill and countersink a 1 1/2" screw through the walls in the center of each triangle shown in figs. 68 & 69. Don't add glue in case adjustments are needed later. The triangular spacers separate walls C. & D. top to bottom for a channel where the rainbow can move. C. & D. also serve as back walls for the house sections added later. Fasten the C. & D. to the deck with four- 1 1/2" long screws as shown in fig. 68 on PAGE NINE. Do not apply glue in case the walls need adjustment later. Drill a hole the size of a 2" long nail through both C. & D where shown checking that the holes are parallel to the deck. The rainbow will pivot on the nail. Drill a 1/4" hole where shown for a 1 1/2" long, 1/4" diameter dowel in wall D. The dowel will fit in the hole and on through the half-moon slot in the rainbow assembly. This will allow the rainbow to rotate over 180 degrees stopping at the rainbow's full unveil point and at the concealed point. Install the nail pivot and dowel when the rainbow assembly is installed. The dowel and nail may need a slight relocation if parts don't line up properly. Proceed to PAGE TEN for building the rainbow assembly.

DECK A. CONSTRUCTION: Refer to figs. 43 thru 47 on PAGE SEVEN during the next step. Use a nice piece of 3/8" thick plywood such as Baltic birch for deck A. The finish could be left a natural plywood color, stained or painted to complement other woods in the project. Also veneer could be laminated to the plywood. Make four copies of the quarter pattern on this page and tape together like in fig. 58. If possible make mirror image copies. If not, two of the four copies will be upside down with no pattern showing for the gray channel or screws. For those, cut out the gray part and mark the screw locations with a nail. Cut out the deck. The left and right (flat) ends should fit against the left and right end posts in the hull of the Ark even with strip #11. Cut out the (gray) rainbow channel in the middle. It may be easier to first drill both ends to 5/8" diameter then cut between the holes with a jig saw removing the gray area. The rainbow assembly will rotate in this channel. Walls C. & D. are mounted 9/16" apart for 1/2" for the rainbow assembly and a 1/32" gap on both sides for clearance for the rainbow. The walls could be placed closer together for a tighter fit for the house components added later, but the rainbow could rub on the side compromising the painted rainbow surface which needs protection. Countersink four holes for screws from the underside where shown. Mark through the pattern at the hole locations then drill small holes through the top of the deck. Then drill back from the underside where the screws will be installed. Open the hull and set deck A in place aligned against the bottom edge of strip #11 (see below). The forward edge of the deck overhangs to the front. **CONTINUE ACROSS THE PAGE**



Please note: when carrying the ark, hold it at both ends with the side that opens toward you in case it pops open.

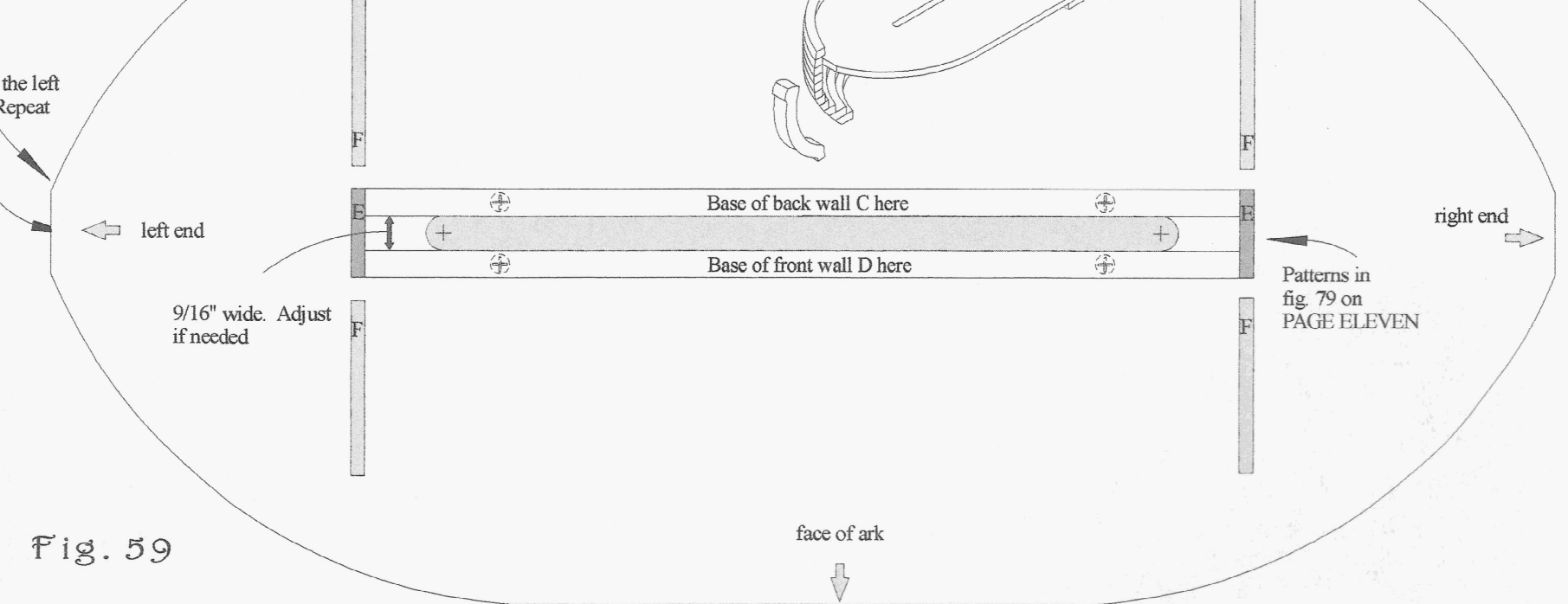
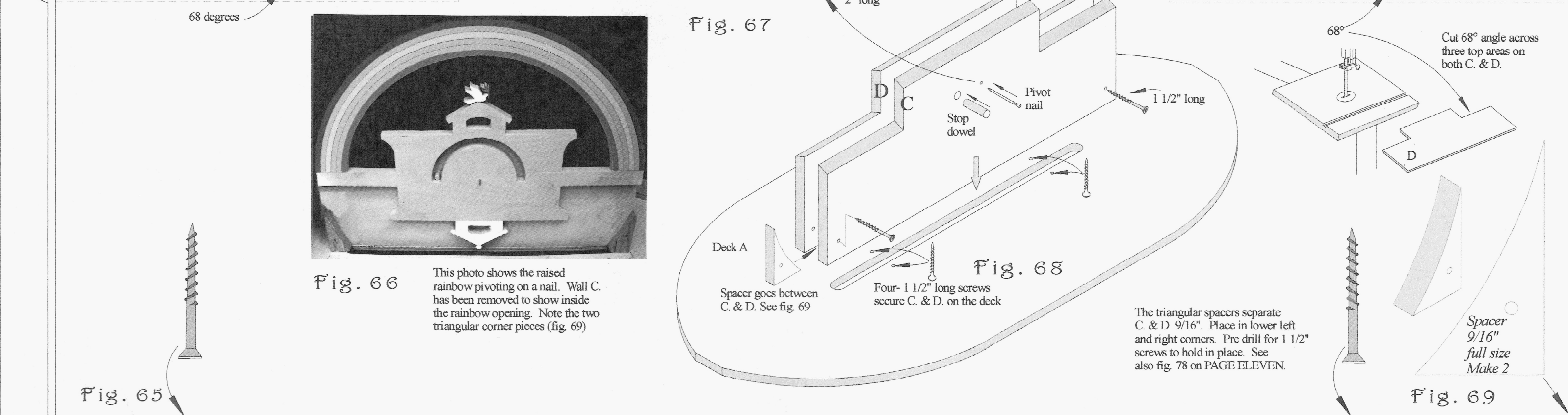
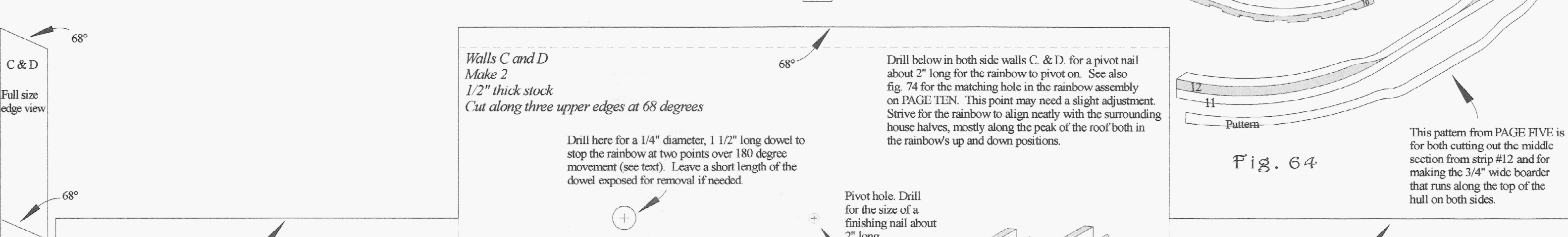
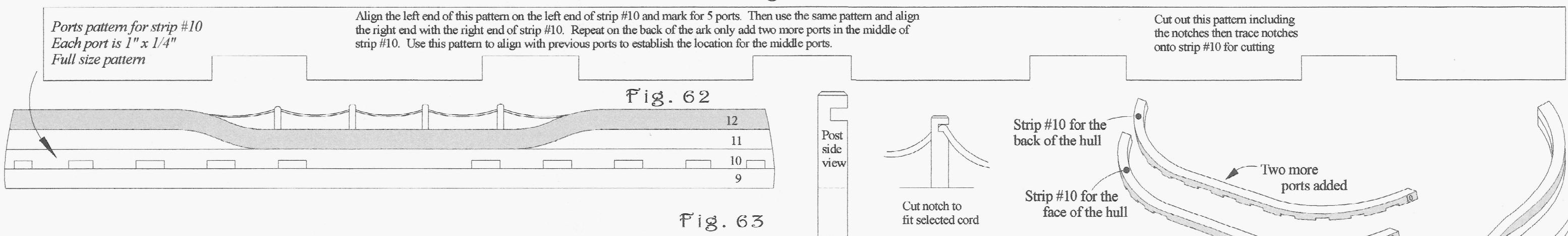
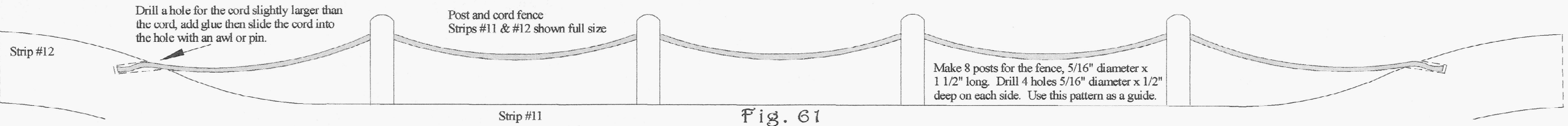


Fig. 59



The top band on the rainbow is red. Possibly also color over the top of the arch with red as well.

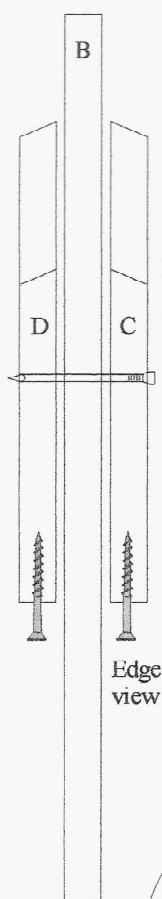


Fig. 70

Fig. 71

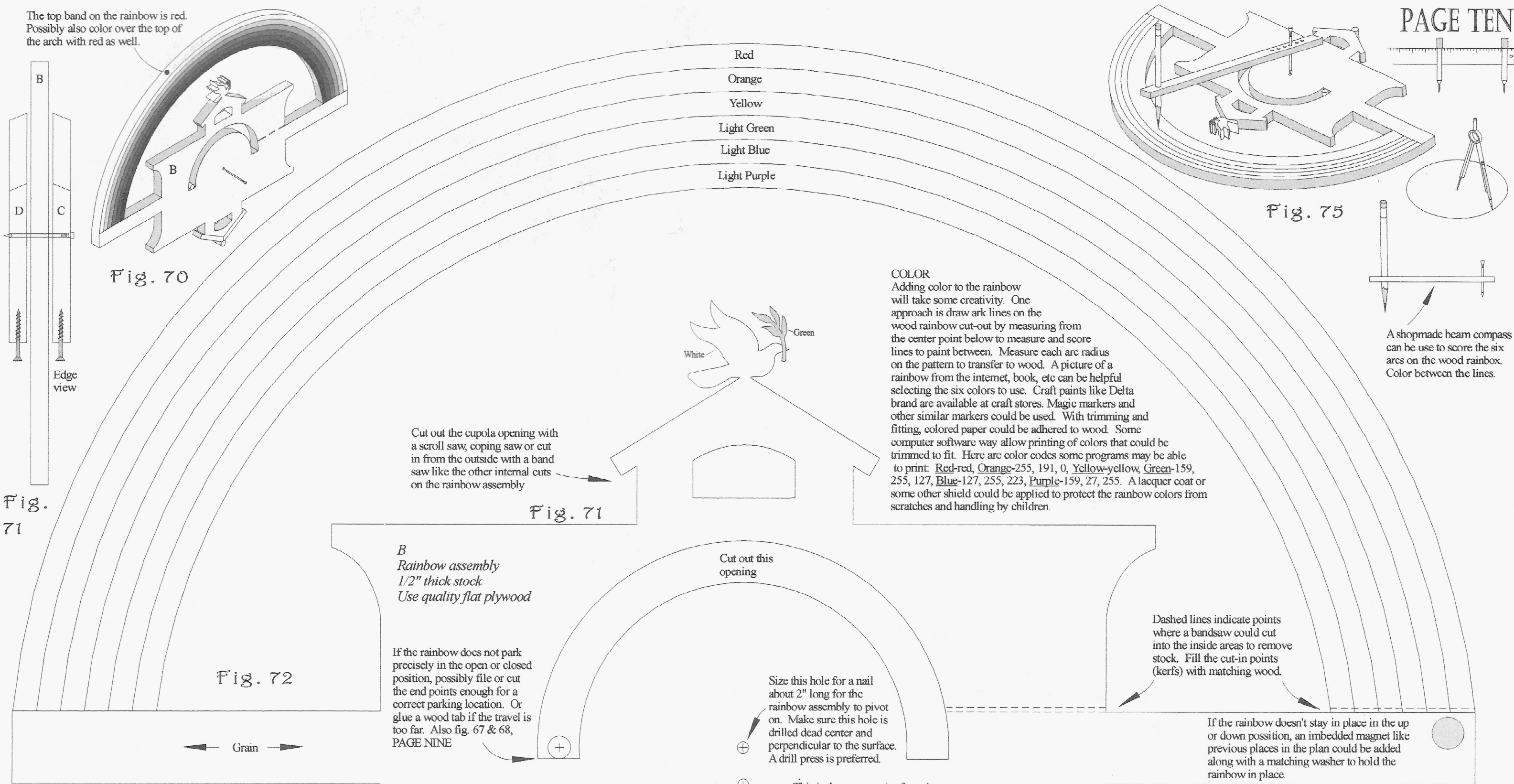


Fig. 72

Fig. 71

Fig. 74

MAKING THE RAINBOW ASSEMBLY

The rainbow is a major feature of this project. Wait until friends and family see it rising from the ark. It will take some work and possible calibration while installing it. Make a copy of this page and apply the rainbow pattern to 1/2" thick flat stock. When installed the rainbow rotates clockwise one half turn to it's upright position. Note the internal, "C" shaped arc. The rainbow comes to a stop at both ends of the arc as it makes contact with a 1/4" dowel inside the curved channel. The rainbow assembly could be stained or painted a desired color before adding the rainbow arc colors.

Attach copola pattern here

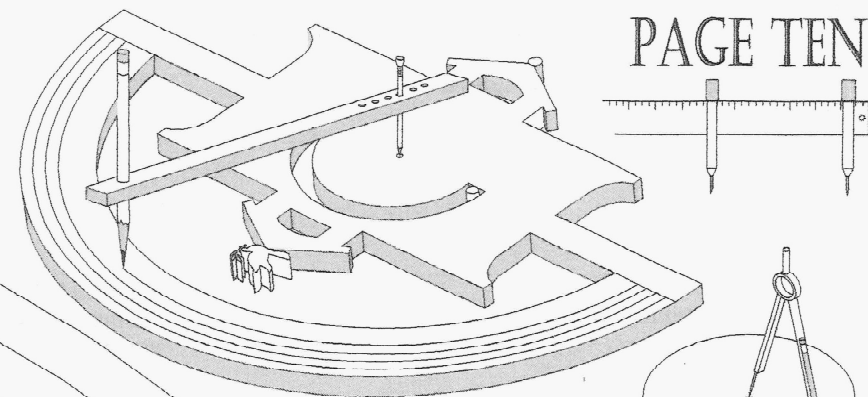


Fig. 75

A shopmade beam compass can be used to score the six arcs on the wood rainbow. Color between the lines.

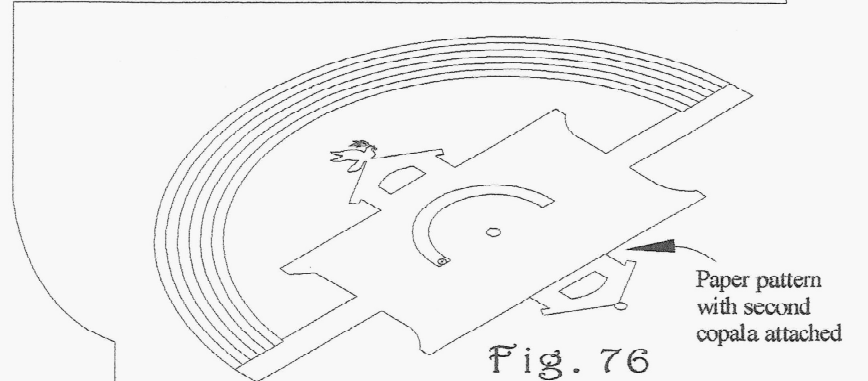


Fig. 76

Paper pattern with second copala attached

Fig. 73

Tape a copy of this copula pattern at the arrows to the right (fig. 76)

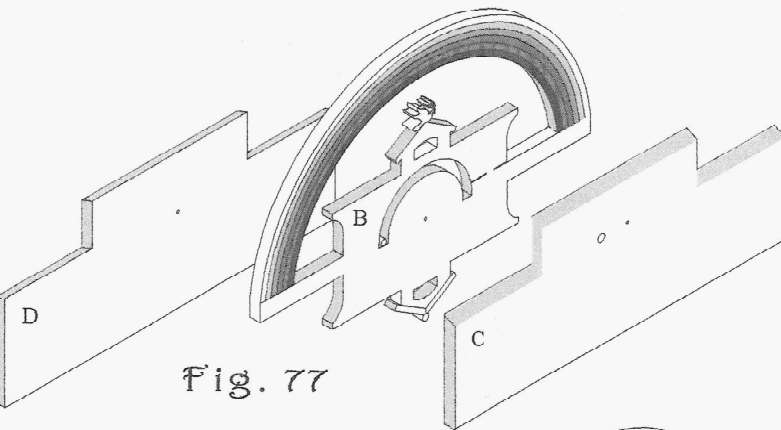


Fig. 77

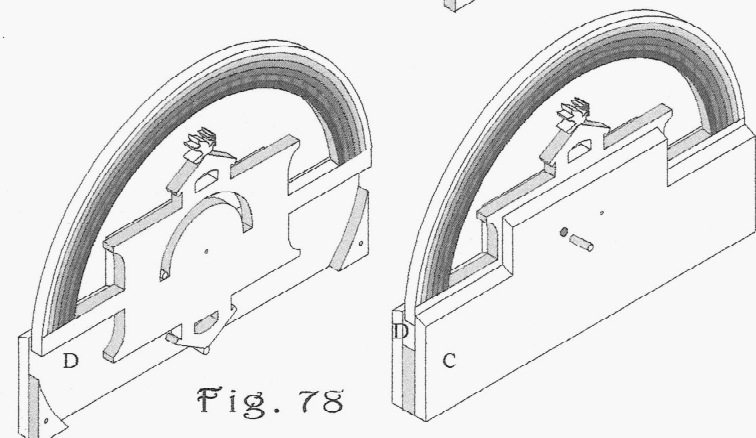


Fig. 78

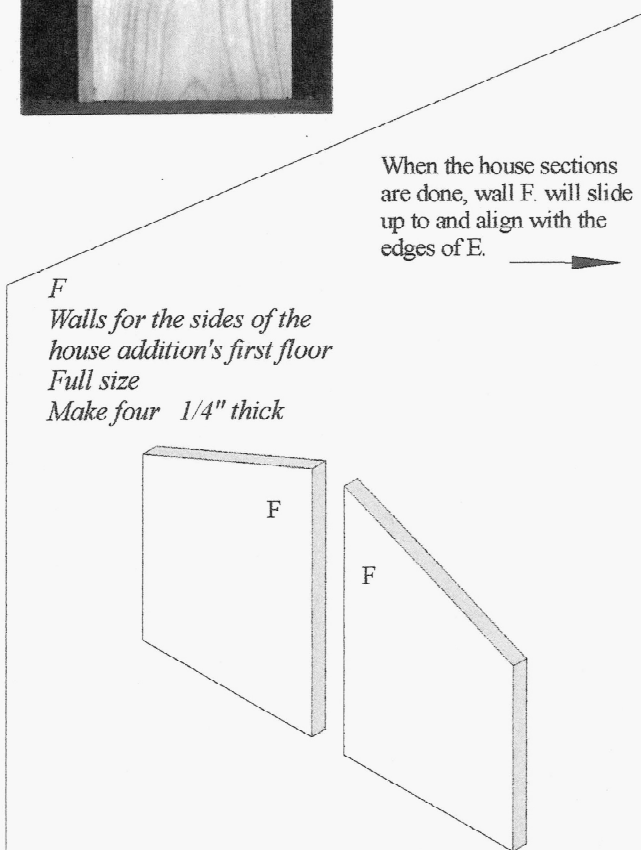
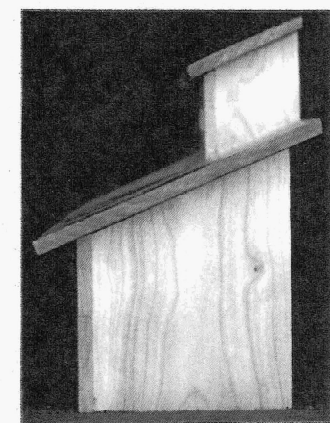
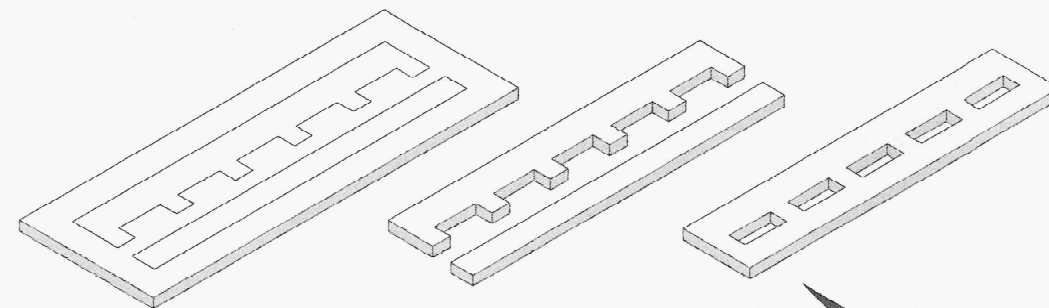
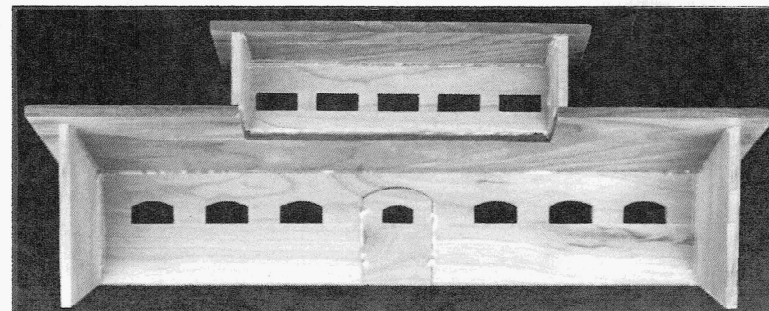


Fig. 79

The house on the deck has two sides. Both sides are the same. They fit up against walls C. and D. The full size patterns are on PAGES ELEVEN, TWELVE & THIRTEEN. Also study the sequential drawings on PAGE SEVEN. The house additions are not attached to the deck but are removable so they can be lifted off the ark to reveal the corrals and bird perches inside. All wall and roof parts are 1/4" thick. If working with contrasting woods, consider the windowed sections and end walls in one wood color and the roofs in another. It will be easier to cut out the windows by separating the (window) patterns for the front of each house at the dashed line. Then cut out the parts separately (fig. 85) including cutting out the windows then gluing the parts back together (fig. 82).

Because the house additions are somewhat fragile and could be removed often, it is suggested, after the house additions are glued and dry, that the joints be reinforced with a moderate bead of hot glue or epoxy along the inside joints.



L
1/2" thick
Make 2
1/8" accent hole
full size

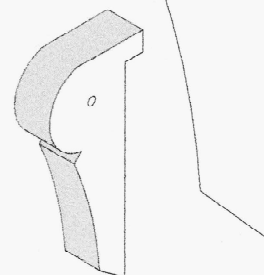
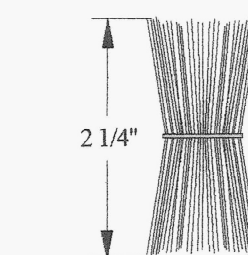


Fig. 81

The top and bottom edges are tapered at 68° but opposite of each other



Fig. 82



Food for the animals can be placed around the Ark. Grass hay or a similar material can be cut to 2 1/4" long. Bind tight with wire then cover the wire with jute, hemp or any rustic looking twine. Short clippings can be glued to the corral floors.

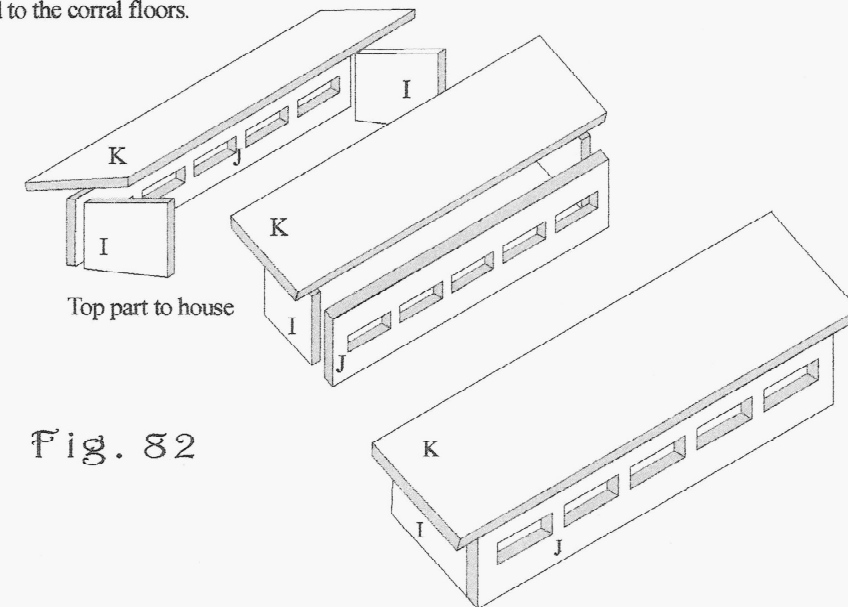


Fig. 84

Some fun wood miniatures can be added throughout the Ark. Purchase from the internet including at. Try www.caseyswood.com

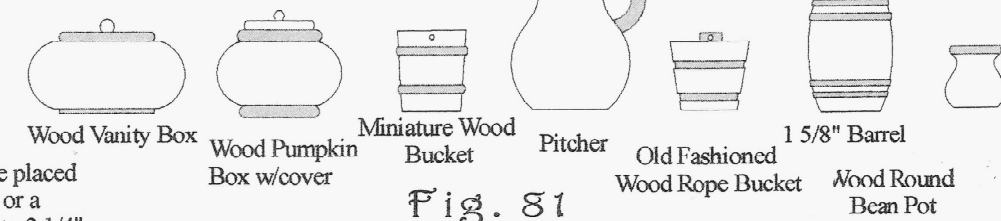


Fig. 85

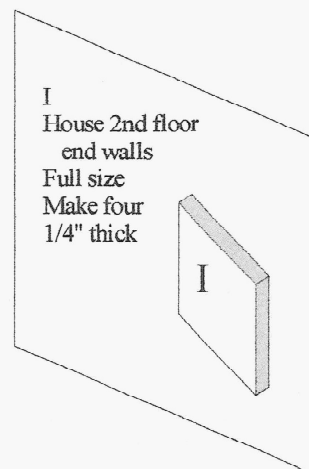


Fig. 86

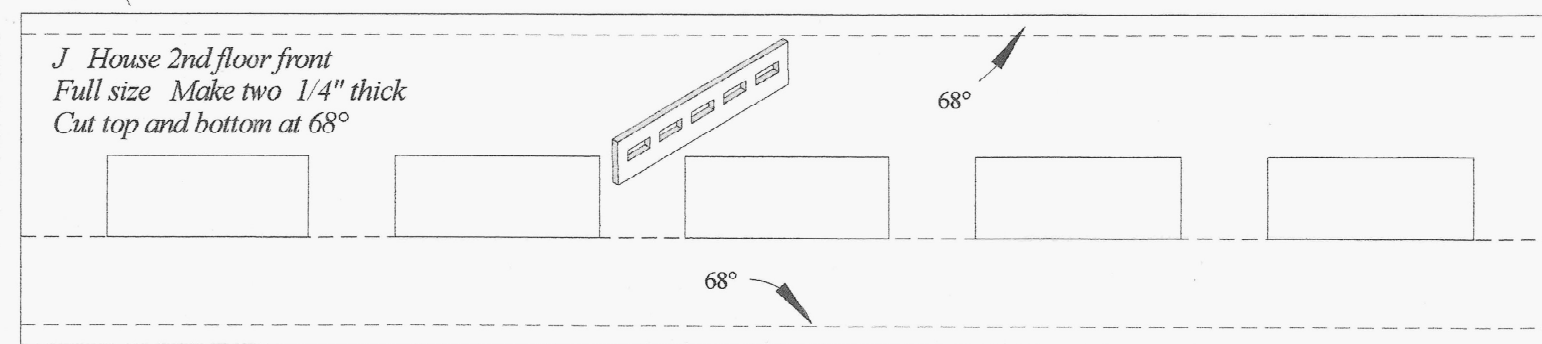
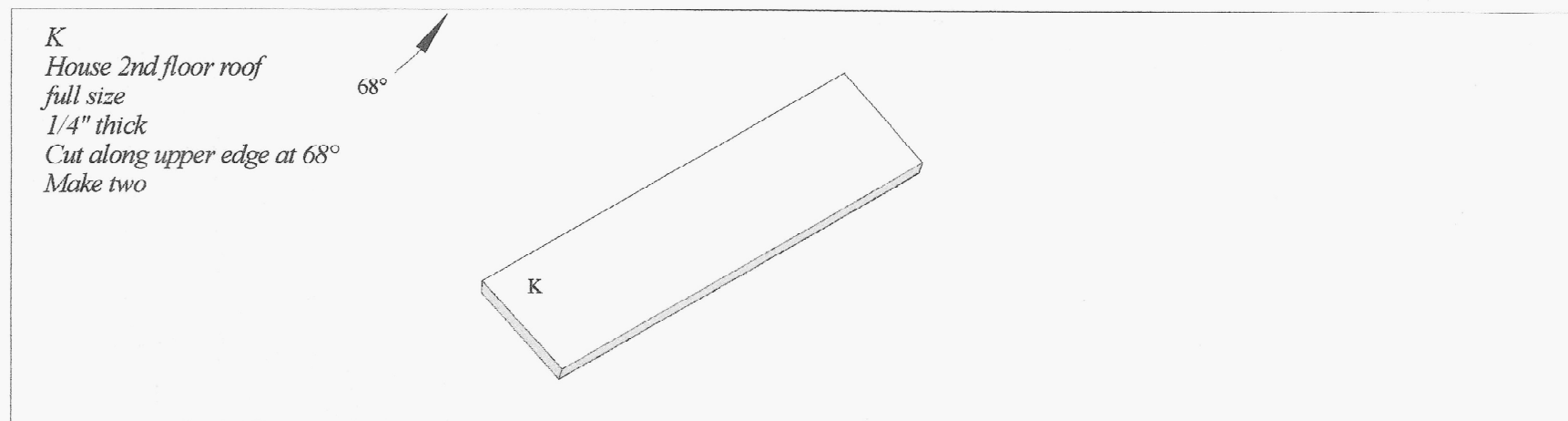


Fig. 87



K
House 2nd floor roof
full size
1/4" thick
Cut along upper edge at 68°
Make two

68°

68°

68°

J House 2nd floor front
Full size Make two 1/4" thick
Cut top and bottom at 68°

E
End supports
Make 2
1/4" thick stock

When the house sections are done, wall F. will slide up to and align with the edges of E.

F
Walls for the sides of the house addition's first floor
Full size
Make four 1/4" thick

K

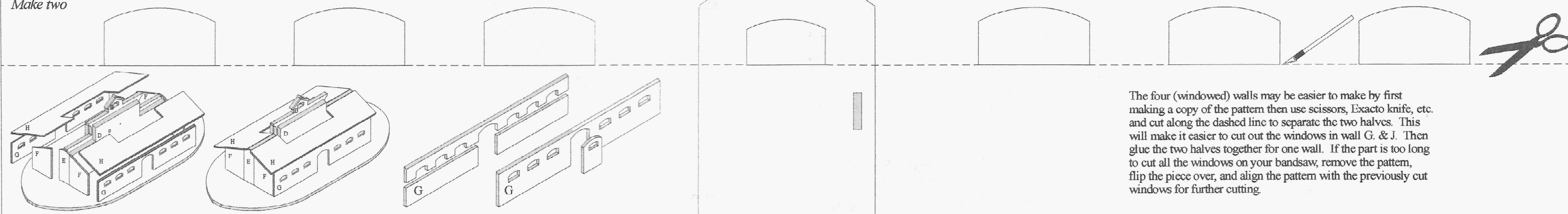
E

F

F

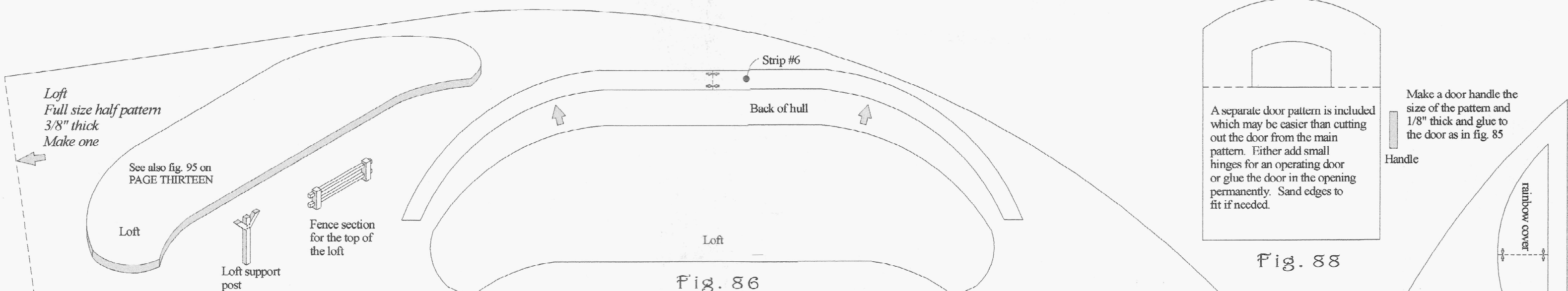
K

G
Front of the first floor of the house additions
Full size 1/4" thick
Make two



The four (windowed) walls may be easier to make by first making a copy of the pattern then use scissors, Exacto knife, etc. and cut along the dashed line to separate the two halves. This will make it easier to cut out the windows in wall G. & J. Then glue the two halves together for one wall. If the part is too long to cut all the windows on your bandsaw, remove the pattern, flip the piece over, and align the pattern with the previously cut windows for further cutting.

Fig. 85



A separate door pattern is included which may be easier than cutting out the door from the main pattern. Either add small hinges for an operating door or glue the door in the opening permanently. Sand edges to fit if needed.

Make a door handle the size of the pattern and 1/8" thick and glue to the door as in fig. 85

Handle

Fig. 88

Inside the hull is a second level or loft. The 3/8" thick, crescent shaped floor is attached in the back of the hull against strip #6 and down on the narrow edge of strip #5. See both drawings in fig. 7 on PAGE TWO. See also fig. 55, PAGE EIGHT and fig. 95, PAGE THIRTEEN. Make two copies of this pattern, tape together like previous patterns and apply to 3/8" thick plywood and cut. Sand down sharp edges on the overhanging edge. It may be easier installing this floor with deck A. above removed. Sand to fit then glue in place. Cut out five wall posts in fig. 99, PAGE THIRTEEN from 3/8" thick stock. If wanted add four dowel accents to each post following the same procedure as done on the outside of the hull. Space equally under the forward edge of the loft. Check that the loft is level and trim the five posts to length and glue in place. The left and right rounded ends of the loft project out slightly. Watch clearance as the face of the ark is closed and trim if necessary. Build two fence lengths in figs. 92 & 96 on PAGE THIRTEEN. Glue fences at the foreword edge of the loft on both sides of the rainbow cover (fig. 89).

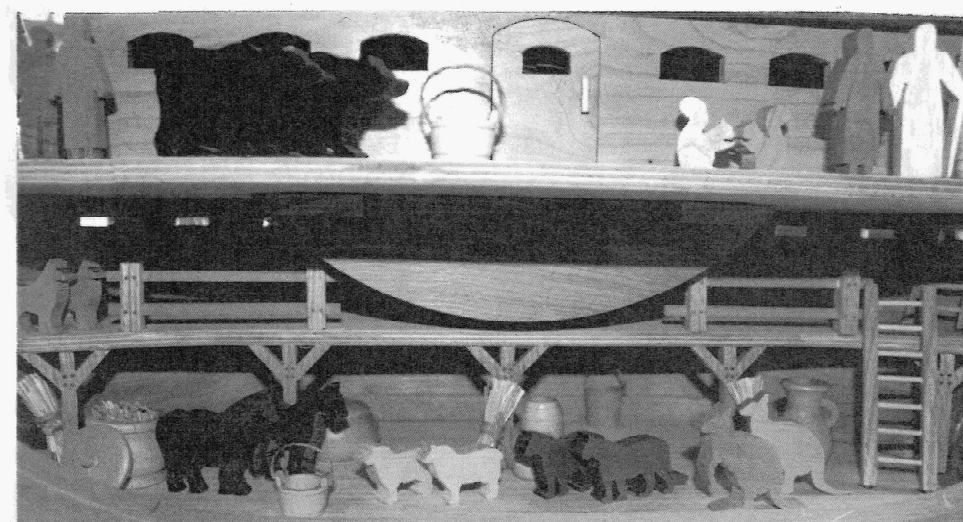


Fig. 89

The rainbow cover is an option. The rainbow, a surprise feature on the Ark, it can be hidden from view while down in the hull. Glue this cover in front of the lowered rainbow and to the underside of the deck (fig. 89).

side view

Fig. 87

Rainbow cover
Full size
1/4" thick plywood
1/2 pattern
Brackets: 1/2" x
1/2" x 2" long

7/16" x 7/16"

Overhead view of post and railing

Glue against the timber frame end posts (see fig. 96).

"L" shaped fence

Fig. 90

Full size 1/4" thick Make 8

1/4" thick fiberboard or similar

"T" shaped fence

Full size Make 8

Fig. 91

Make two for loft top

Straight fence Fig. 92

Fig. 93

Joints cut similar to the post in fig. 94

1 5/8"

1/8" dia. dowels

5"

Drill for 1/8" dowels 1 5/8" long

2 1/32"

3/8"

5/16"

Split post in half

Loft supports Full size Make 5 3/8" thick Cut length to fit under the front edge of the loft

Fig. 98

Fig. 99

Line birds here 3/16" diameter, 7" long full size

Drill 3/16" diameter

7/16" x 7/16" x 2 3/16"

Notch to fit

Corbel Full size Make 4 7/16" thick

Fig. 100

Fig. 101

68°

68°

68°

Timber frame structure Full size Make two

Fig. 94

7/16" x 7/16" x 3 3/4"

Corbel Full size Make 4 7/16" thick

Loft See also fig. 89 PAGE TWELVE

Fig. 95

Fig. 96

A Deck

Fig. 97

Corbel Full size Make 4 7/16" thick

See fig. 5 PAGE TWO

Duplicate the corbels on the other side

Accessories

The extras on this page can be built for inside the hull and for under both removable house halves. The timber frame structure (fig. 97) is fashioned from 7/16" x 7/16" stock. It stands in the back of each house near walls C. & D. Possibly prepare enough stock for all the parts beforehand (about 9 feet long). Build two timber frame structures following the full size pattern in fig. 97. Notch joints. Add dowel accents like on the side of the hull. Cut corner corbels and glue in place. The top of the structure is a perch for the birds made from a 3/16" dowel 7" long. Hot glue birds along the face. The horizontal fence rails can be made from fiberboard or plywood. Use the overhead patterns to make two fence rails for each style; "L" shaped (fig. 91), "T" shaped (fig. 98) and the straight fence (fig. 92). Note: glue the "L" shaped fence back end against the face sides of the timber frame structure. For the "T" shaped corral fences, cut a post in half length wise and glue at the fence back ends (fig. 98). Space the two "T" shaped fences evenly between the outside "L" shaped fences (fig. 96). Add a ladder if wanted like in fig. 93.

Add standoffs behind each outside posts 1" high x 1/4" thick x 7/16" wide and glue against walls C. & D. (fig. 96)

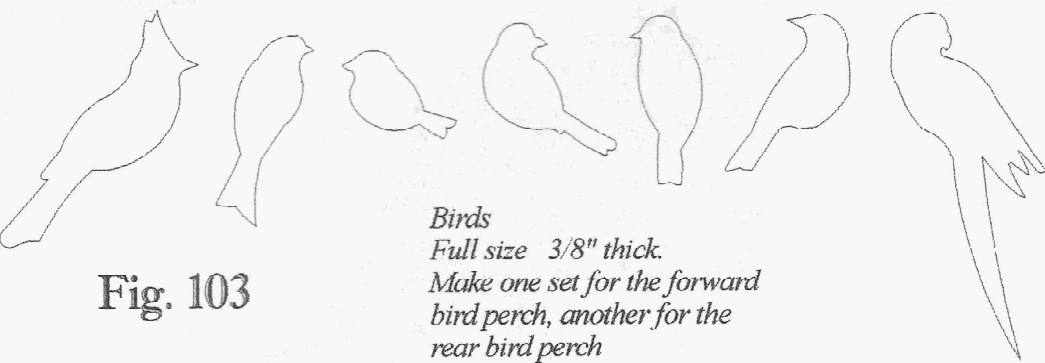
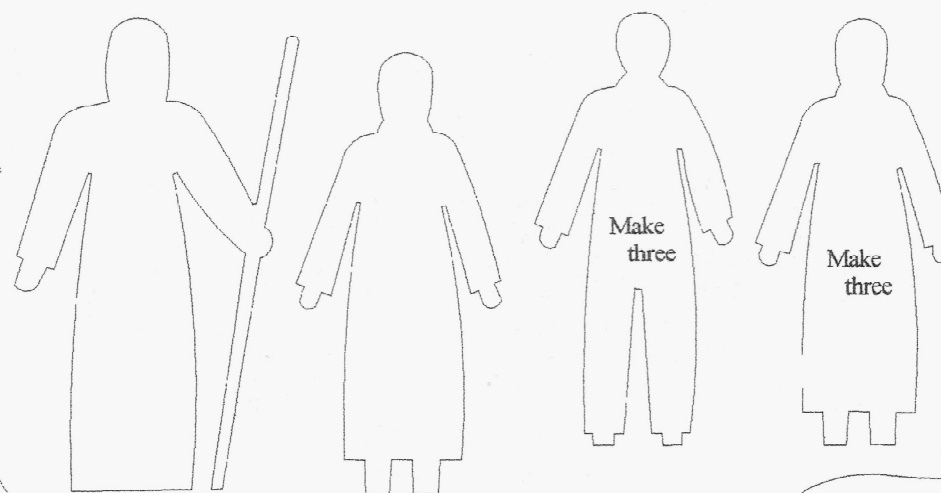
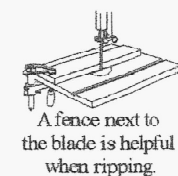


Fig. 103

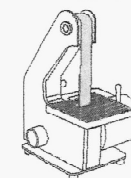
Birds
Full size 3/8" thick.
Make one set for the forward
bird perch, another for the
rear bird perch



Patterns on this page are for cutting out animals, birds, Noah, his wife, and their three sons and their wives. Cut out two of each animal except where noted. Use 1/2" thick plywood or solid wood. Figures could be scaled up or down on a copy machine. Even make the male animal slightly larger than the female. 1" thick solid wood could be cut then ripped down for two figures. Extra animals of your own design could be added. The figures can be made from assorted colors of wood. A few examples, the bears could be black bears fashioned from Ebony. Lacewood works well for giraffes with it's spotted texture. And, of course, the Zebras from zebra wood. Some parts of the animals can be fragile. If making the ark for children's play, consider using 1/2" plywood for strength. Sand down sharp edges. Possibly paint in assorted colors. See animal books or the internet for colors for animals.



A fence next to the blade is helpful when ripping.



Belt and disc sanders are useful on small projects like this

Fig. 104

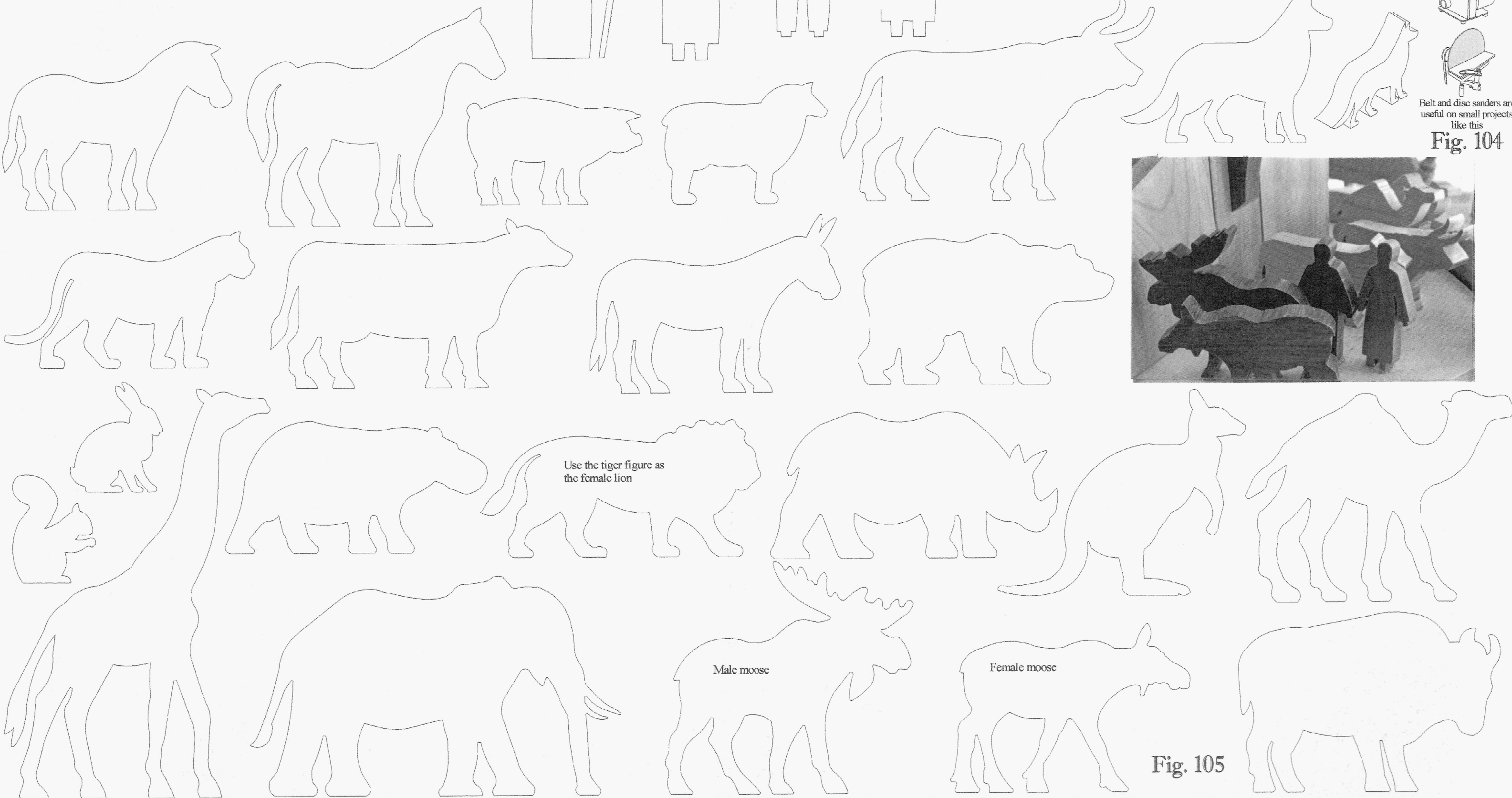


Fig. 105

